Textile Industries

FEBRUARY, 1948

formerly COTTON Textile Industries

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PER. SEC'T'S

FEB 2
SERIALS

The

BEGINNING OF KNITTING YARN HAVING VITAMIN

Q

Users know we buy quality cotton . . . . that is our story "Vitamin Q." Quality Insuring Quality is expensive, but for over forty years knitters tell us it has paid dividends. It's a tradition with us at B & C.

The Quality of Boger and Crawford knitting yarn is guaranteed — the highest tribute we can pay it. Signed . . . . . Fredericka Boger

BOGER and CRAWFORD

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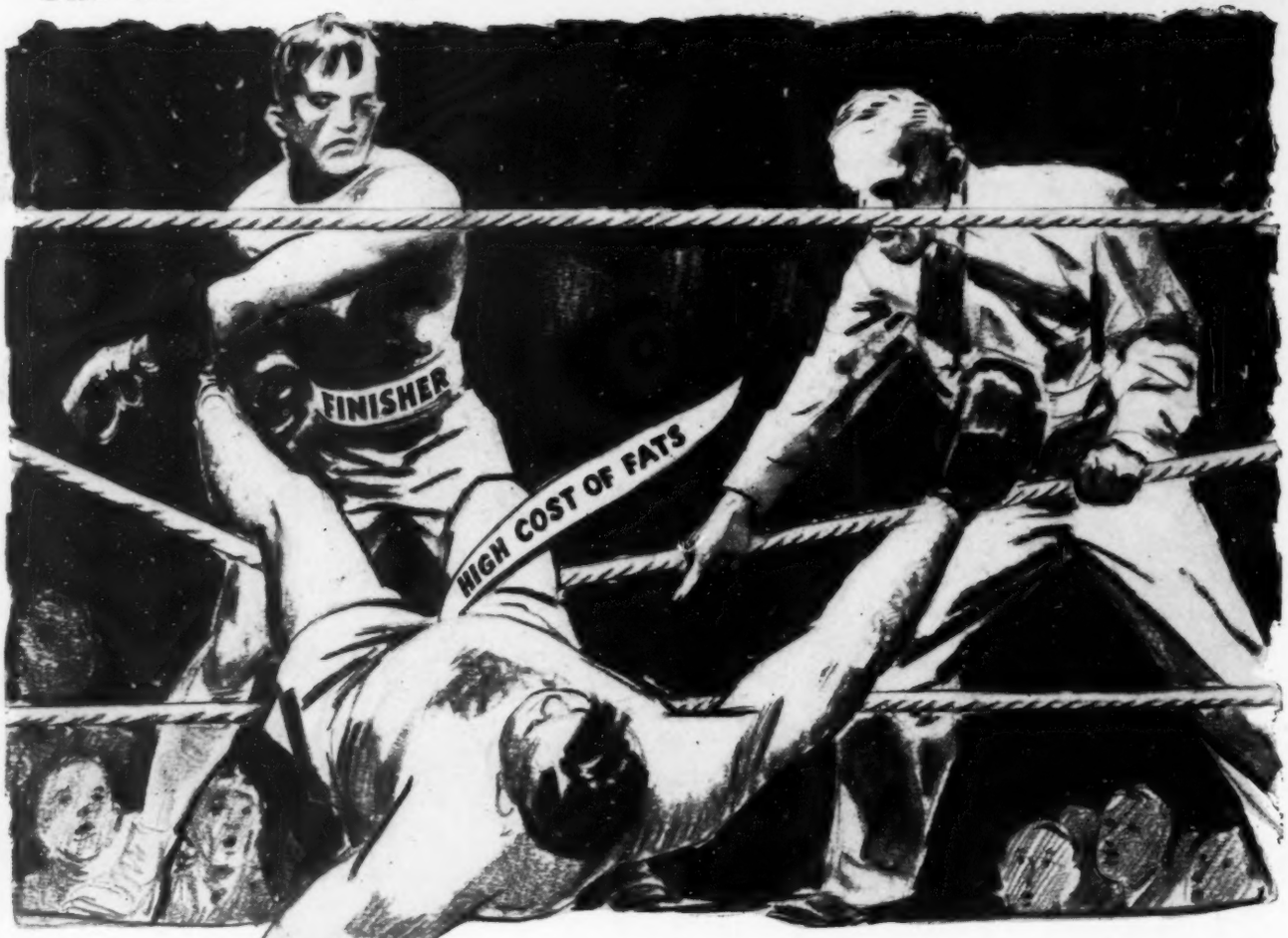

How to lick the high cost of fats

You hardly need to be reminded that the cost of most fats for finishing is rapidly becoming prohibitive. You may or may not realize however that there are products which can be used for these purposes which give better results at comparable cost or equal results at lower cost.

Among such products in the AHCO line are the following:—

AHCOVELS*

If your problem is primarily one of softening, one of our AHCOVELS will solve it. Although constantly improved, these synthetic substantive softeners have not changed in price for seven years. They give an unsurpassed hand, softness and drape to cotton, rayon, nylon, acetate or wool fabrics. Almost pure white in color, they are highly resistant to yellowing, very stable when subjected to heat and the E, F and R types do NOT affect the light fastness of colors. Small quantities, compared with sulphonated tallows, are required for a given result.

SOFTENER CDEP

If you need extra body with softness, SOFTENER CDEP is the solution to your cost and quality problems. It gives the same effect as sulphonated tallows but is considerably cheaper on a yard for yard basis.

When we suggest that you try these products, we are not asking you to experiment. Ahcovels are the most popular substantive softeners on the market and SOFTENER CDEP has also proved its value in volume production.

Let us recommend a formula for your softening or weighting problems.

*Trademark Reg.

ARNOLD, HOFFMAN & CO. INCORPORATED

MANUFACTURING CHEMISTS

ESTABLISHED 1815 • PLANTS AT DIGHTON, MASS. AND CHARLOTTE, N. C.

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Volume 112 Number 2

FEB 19 1948

Yes

The rest of the World wants automatic looms, too, but of our last 12 months' output, only 15.2% has gone into the Export market.

15.2% EXPORT

84.8% DOMESTIC

Loading a 48" X-2 loom for shipment by air

And

During the same 12 months, we have built more than twice as many looms as our annual average for the past 15 years.

So

Many more Draper looms were built last year for mills in the United States, than in any other year since the introduction of the X Series high speed looms and in 1948 we anticipate a still greater volume of looms will be shipped to the mills of this country.

DRAPER CORPORATION
Hopedale Massachusetts

BEAR DOWN ON BEARING COSTS

Save maintenance costs with the lubricant that stays stable—

Texaco Regal Starfak No. 2

You'll get smoother, more economical operation from your grease-lubricated, anti-friction bearings in spinning frames, looms, motors and other machinery, when you protect them with *Texaco Regal Starfak No. 2.*

Texaco Regal Starfak No. 2 exceeds every requirement for an ideal anti-friction bearing lubricant. It stays remarkably stable under all operating conditions—resists oxidation and gum formation, separation and leakage. It stays right in the bearings—makes them last longer, require fewer repairs and replacements.

You'll find also, that *Texaco Regal Starfak No. 2* is easy to apply, and that its low starting and running torque is a big help in keeping your power consumption low.

To enjoy these operating economies in your mill, use Texaco Products and Lubrication Engineering Service. Call the nearest of the more than 2500 Texaco Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, New York.

TEXACO

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

TUNE IN . . . TEXACO STAR THEATRE presents the TONY MARTIN SHOW every Wednesday night. • METROPOLITAN OPERA broadcasts every Saturday afternoon.

Volume 112, Number 2

Textile Industries

FEBRUARY, 1948

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Business Manager

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"Which Squirrel-Cage Motor Shall I Buy?"

Open-Type? This general-purpose squirrel-cage motor meets about 9 out of every 10 application requirements; so chances are it's the design you'll select. Allis-Chalmers builds generously proportioned, rugged *open-type* squirrel-cage motors in sizes from 1 hp to the largest practical requirement.

Splash-Proof? Where operating conditions are conducive to entrance of particles or liquids into ordinary motors from either top or sides, Allis-Chalmers *splash-proof* squirrel-cage motors may be your best buy. They're designed to *exclude* top or side directed particles and liquids. Sizes 1 hp to the largest.

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Totally-Enclosed? Explosion-Proof? Completely weather-proof and fan-cooled, these motors are built to beat abrasive dust, dirt and corrosive fumes, or moisture conditions that cause windings in ordinary motors to deteriorate. *Explosion-proof type* for oil refineries, paint, varnish or lacquer plants, etc.; Underwriters approved; reduce hazards in explosive or dust atmospheres. Either type built from 1 hp and up.

Are Motor Decisions More Important Today?

YOU BET THEY ARE! One *obvious* reason is the need for keeping costs down. Another is that in the rush to fill demand much equipment is being misapplied; making it harder to maintain profits not alone today, but tomorrow, the next day and the next year—as long as misapplication continues!

That's why it's important to take a good look at motors — their characteristics — your equipment — power source and surroundings — *before* you buy and apply! If you're in doubt, don't take chances — call a motor expert! ALLIS-CHALMERS, MILWAUKEE 1, WIS. A 2327

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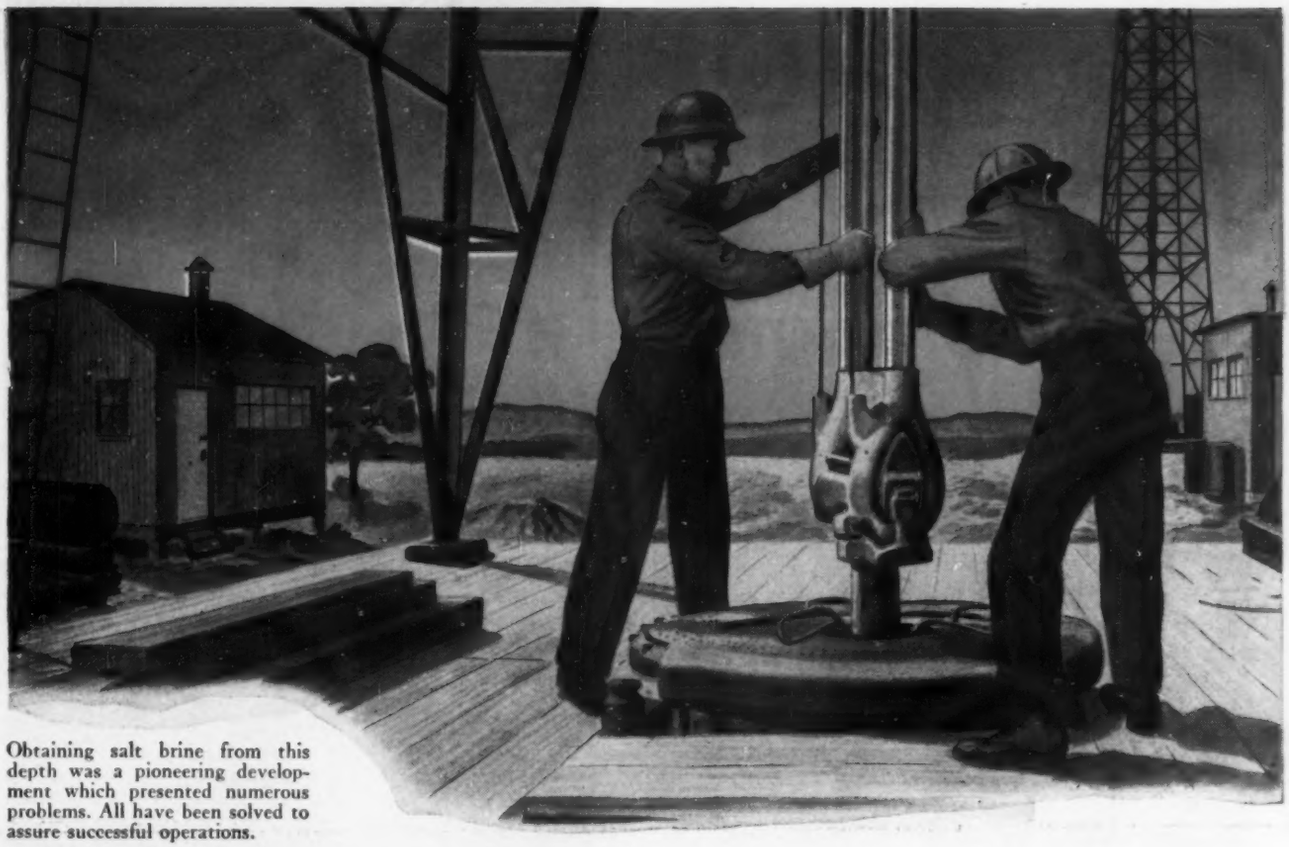
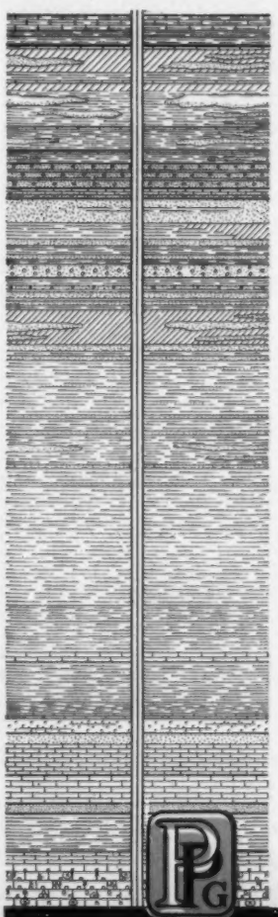
One of the Big 3 in Electric Power Equipment-
Biggest of All in Range of Industrial Products



Obtaining salt brine from this depth was a pioneering development which presented numerous problems. All have been solved to assure successful operations.



Chlorine and Caustic Soda

from the world's deepest salt wells

The deepest salt bed in commercial use—6,800 feet below the earth's surface—provides the brine used at Columbia's electrolytic chlorine-caustic soda plant at Natrium, West Virginia. Hot water, pumped down to this great stratum, dissolves the rock salt and forces the brine to the surface.

The favorable location of the Natrium plant was established as a result of pre-Pearl Harbor studies by Columbia. Built and operated for the DPC, its post-war purchase by Columbia assured continued operation so helpful in meeting the urgent needs of industry for caustic and chlorine. The caustic soda is purified by a patented Columbia process to meet exacting uses such as required in the manufacture of rayon.

Pittsburgh Plate Glass Company, Columbia Chemical Division, Pittsburgh 13, Pa. District Offices: Chicago, Boston, St. Louis, Pittsburgh, New York, Cincinnati, Cleveland, Minneapolis, Philadelphia, Charlotte, San Francisco.

COLUMBIA CHEMICALS

PAINT · GLASS · CHEMICALS · BRUSHES · PLASTICS

PITTSBURGH PLATE GLASS COMPANY

GOOD YARN *and* GOOD CLOTH *start in the* OPENING ROOM

There is no better place in the whole mill than the Opening Room to start making good yarn and good cloth. For it is here, in this department that neps, leaf and other impurities are most effectively attacked and more easily removed.

With Saco-Lowell Opening Room equipment you have four effective means of removing the small "peppery leaf", broken seed fragments and similar clinging impurities.

1 . . . by using sufficient Blending Feeders to reduce the stock to such a size that the combination of gravity, grid bars and dead air space becomes most effective.

2 . . . by making use of the air stream and screens in the Dust and Waste Extractors to carry off the light separated impurities.

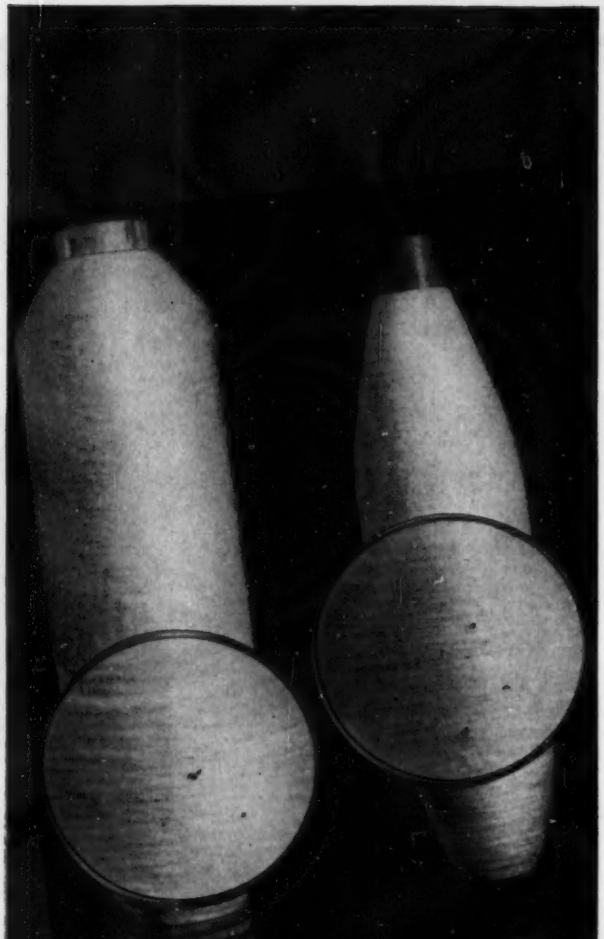
3 . . . by making use of the centrifugal force and impacts generated by the beater in the Vertical Opener to carry the heavy impurities through the grid bars.

4 . . . with the Lattice Opener and Cleaner, preferably in tandem, to complete the reduction and opening of the stock.

. . . and with the recirculating Air Filter used in conjunction with this equipment it is possible to maintain a stabilized and conditioned atmosphere in the opening room so that full regain is possible.

Remember, a modern Opening Room range is something more than a line of machines. To operate to the best advantage engineering as well as equipment is needed. Saco-Lowell offers you both.

If you have made no changes in your Opening Room within the last few years, it is quite probable that the inclusion of additional cleaning equipment can affect some worthwhile improvements in your present processing operations.



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Shops at Biddeford, Maine

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Clean up with TEXAIR

MOST ECONOMICAL HOSE EVER BUILT FOR MILL USE!

HERE'S an outstanding new hose designed to last many times longer than any yet developed for mill clean-up work. It's Texair Hose — Goodyear Research's lastest contribution to greater cotton mill efficiency.

Texair is a light, supple, non-kinking air hose of unusual strength and stamina. It is built throughout of oil-resistant synthetic rubber — won't soften or weaken through contact with oil on machines or in the air line.

Its cover is tough and robust, and built smooth so you can easily pull it across floors and around corners. Reinforcement is a braided ply of strong cabled yarn that provides extra strength to withstand snaking and "tow-rope" strains. Made in 3/8- and 1/2-inch diameter sizes, it will handle pressures up to 125 pounds.

By every test, Texair is the finest and most economical mill hose ever built. Order it today from the G.T.M. — Goodyear Technical Man — or your Goodyear distributor. For further details, write: Goodyear, Akron 16, Ohio or Los Angeles 54, California.

GOODYEAR INDUSTRIAL RUBBER PRODUCTS
GTM -Specified TEXAIR HOSE
for cotton mill clean-up service
A Smooth, tough, abrasion- and oil-resistant cover
B Reinforcing braided ply of cabled cotton yarn
C Non-porous, oil-resistant synthetic rubber
FOR BELTING, HOSE, MOLDED GOODS AND PACKING built to the world's highest quality standard, phone your nearest Goodyear Industrial Rubber Products Distributor.

GOODYEAR

THE GREATEST NAME IN RUBBER

Texair—T.M. The Goodyear T. & R. Co.

The JOY "SERIES 1000" *AXIVANE* FAN

Engineered to do its job better — and at lower cost!

On-the-job Adjustable Blades— an exclusive Joy feature

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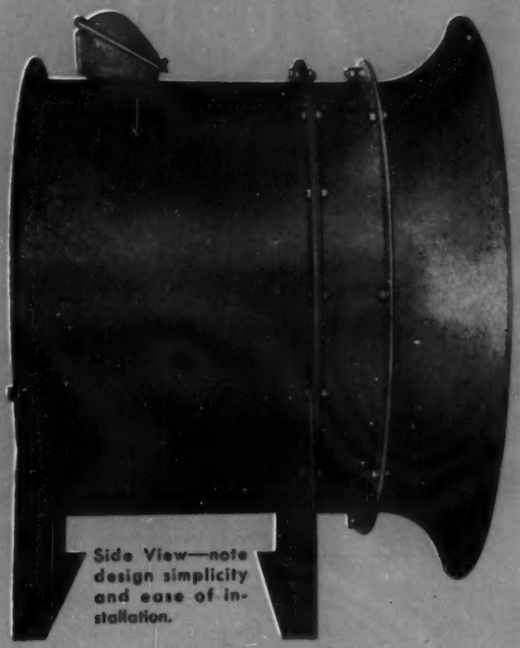
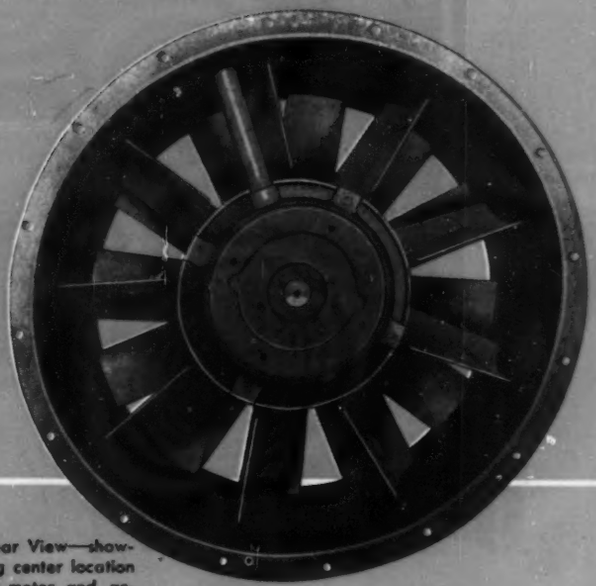
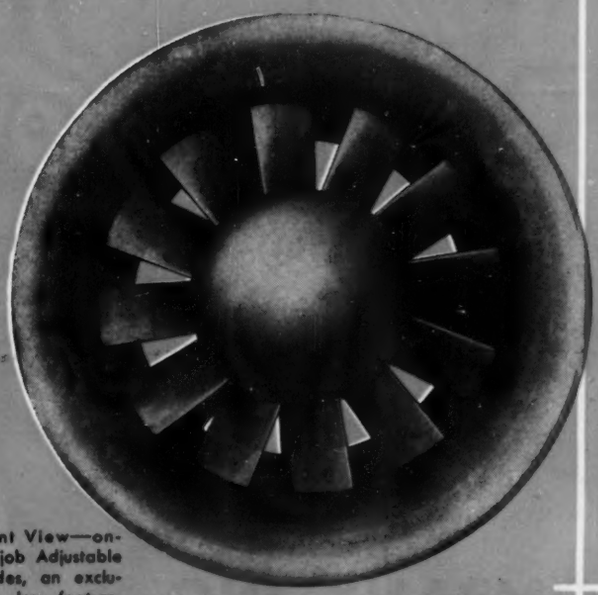
The JOY "SERIES 1000" is a complete integrated line of stock vaneaxial fans for industrial use with a range of volumes up to 100,000 C.F.M.



Side View—note design simplicity and ease of installation.



Rear View—showing center location of motor and accessibility of parts.



Front View—on-the-job Adjustable Blades, an exclusive Joy feature.

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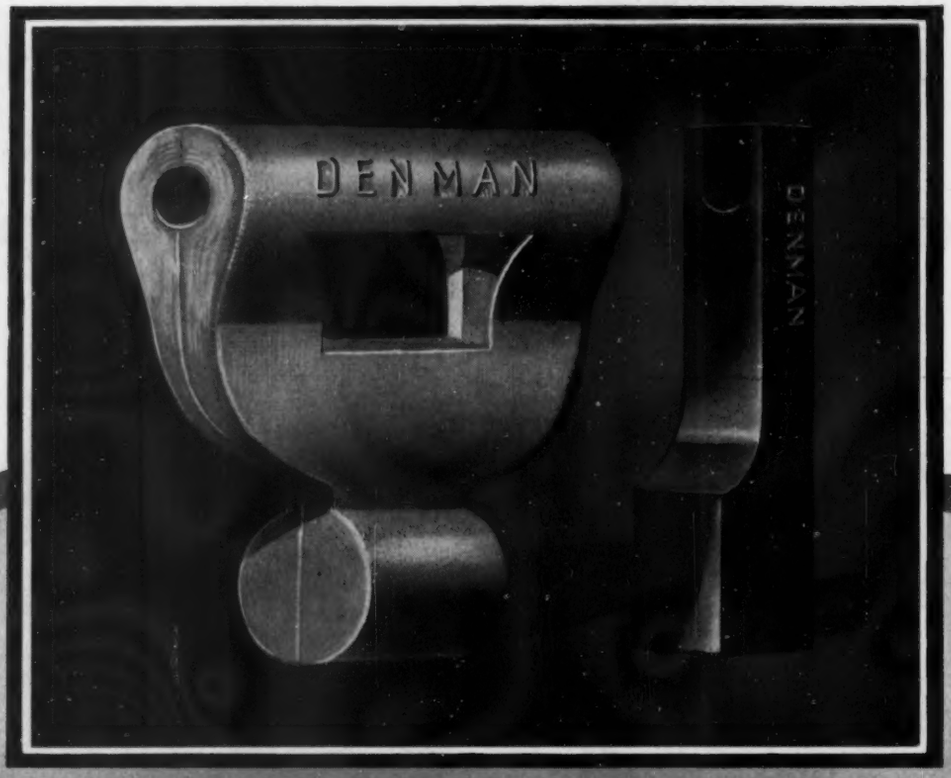


DENMAN *Challenges the* FIELD

Back when many of today's high-speed looms were still in the blueprint stage . . . Denman and Terrell were pioneering tougher rubberized fabric pickers.

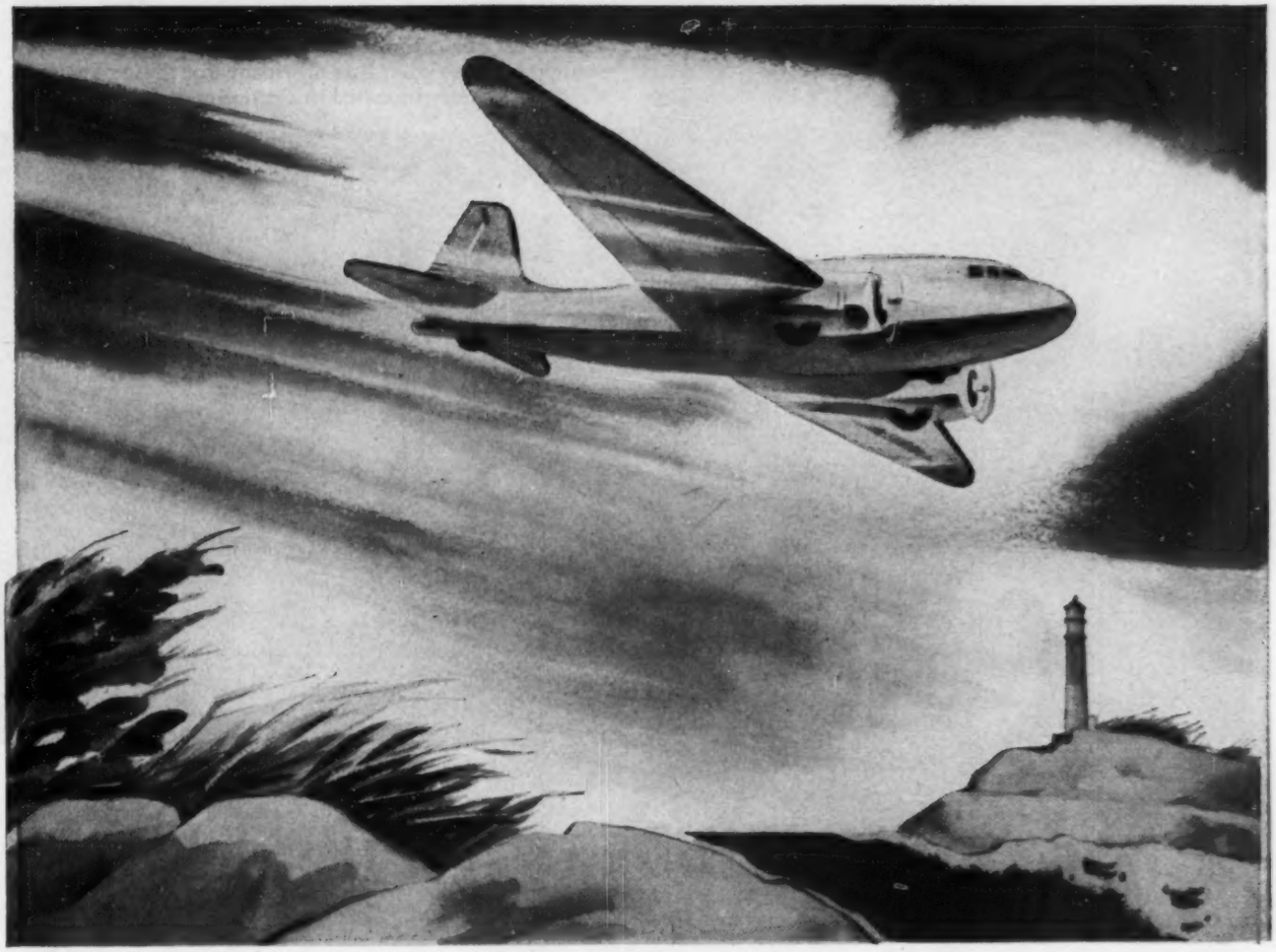
Today, comparative cost records put Denman first in service and economy. Today, also, users of Denman Pioneer Pickers can be sure they are getting a proved and tested product that has been developed and perfected through the continuous efforts of the Denman-Terrell inter-related research . . . research that carries over many years of broad experience and knowledge gained through the cooperation of mills in making actual operating tests, as well as in the laboratory. That's why Denman Pioneer Pickers triumphantly challenge the field—to give you

LOWEST COST PER LOOM . . . PER YEAR

Exclusive Sales Agent

THE TERRELL COMPANY, INC.

CHARLOTTE, N. C.



Flying with a tail wind

Planes take off in almost any kind of weather these days—but every pilot welcomes good flying conditions and a tail wind. That's what makes it easy to fly on or ahead of schedule.

In the same way, bleachers and dyers prize a de-sizing agent that gets the job done on time—makes finishing operations easy—overcomes snags and helps avoid "problem lots."

Take Type L—for instance: here's a Diastafor brand de-sizing agent that is "tops" for easy, economical, trouble-free operation. Yard after yard, you get a fine "hand" in your finished goods. You're "flying with a tail wind" all the time when you use Diastafor.

Diastafor—Type L—has been especially developed to work in a wide range of temperatures and pH. Over and over again it has proved itself on the most difficult de-sizing jobs, giving the same uniformly good results.

Whether you are working with cottons, rayons, or mixed goods—you can depend on Diastafor to give a good finish—no impairment of tensile strength, no streaky or uneven dyeing.

In addition to Type L, Diastafor is available in several other types, to meet any de-sizing problem. If you would like to know more about Diastafor, the favorite de-sizing agent for 40 years, we shall be glad to send you full information and prices. Just write Standard Brands Incorporated, *Diastafor Department*, 595 Madison Avenue, New York 22, New York.

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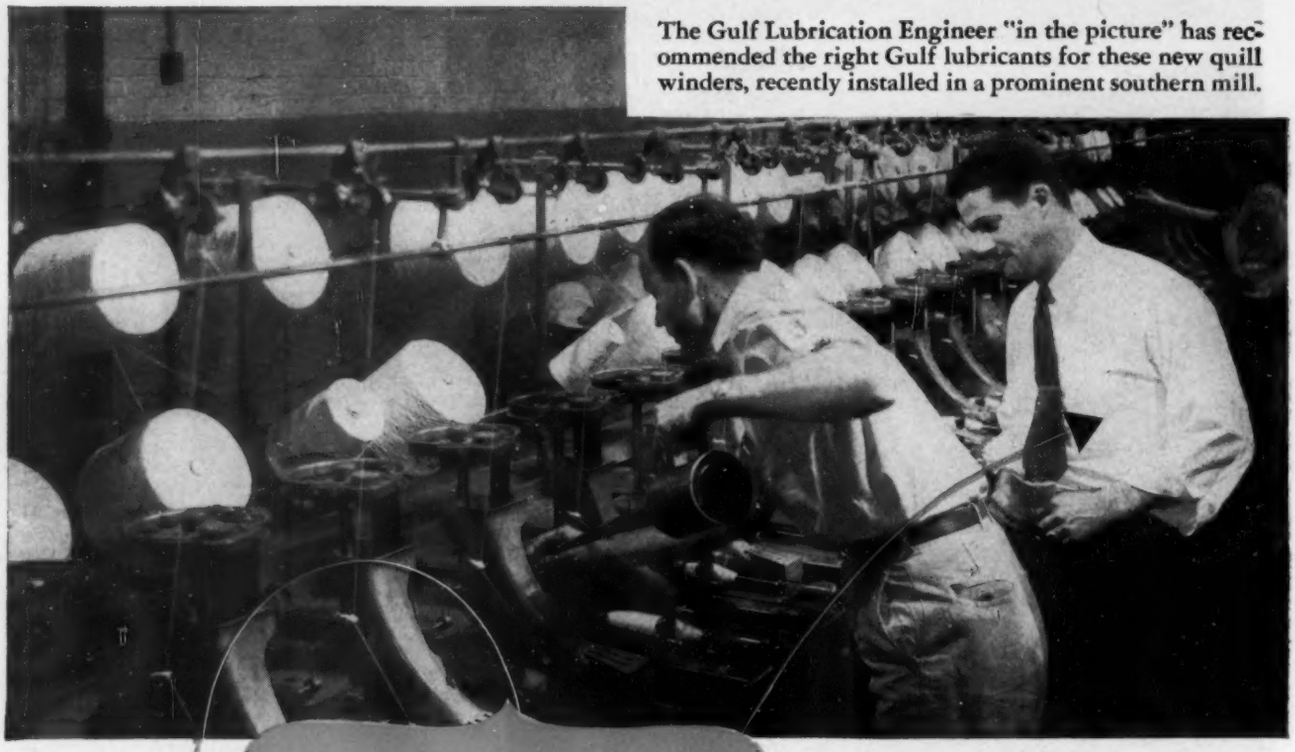

The Gulf Lubrication Engineer "in the picture" has recommended the right Gulf lubricants for these new quill winders, recently installed in a prominent southern mill.

New QUILL WINDERS get the right start for a long life...

when the Gulf Lubrication Engineer is "in the picture"

IF you're installing new quill winders—or any other new equipment—you'll want to insure your large investment as thoroughly as possible against premature mechanical failures, below-par performance, and high maintenance costs.

Here you'll find the services of a Gulf Lubrication Engineer very helpful. He will make a complete survey of each unit of equipment and study your particular operating conditions to determine their influence on lubrication.

After analyzing every important factor, he will recommend for every piece of equipment the Gulf quality oils or greases which will provide maximum protection against wear. Then you can be sure you've made the right start—not only for a long life, but for a trouble-free life with low costs for maintenance.

For the co-operative counsel of a Gulf Lubrication Engineer, write, wire, or phone your nearest Gulf office today.

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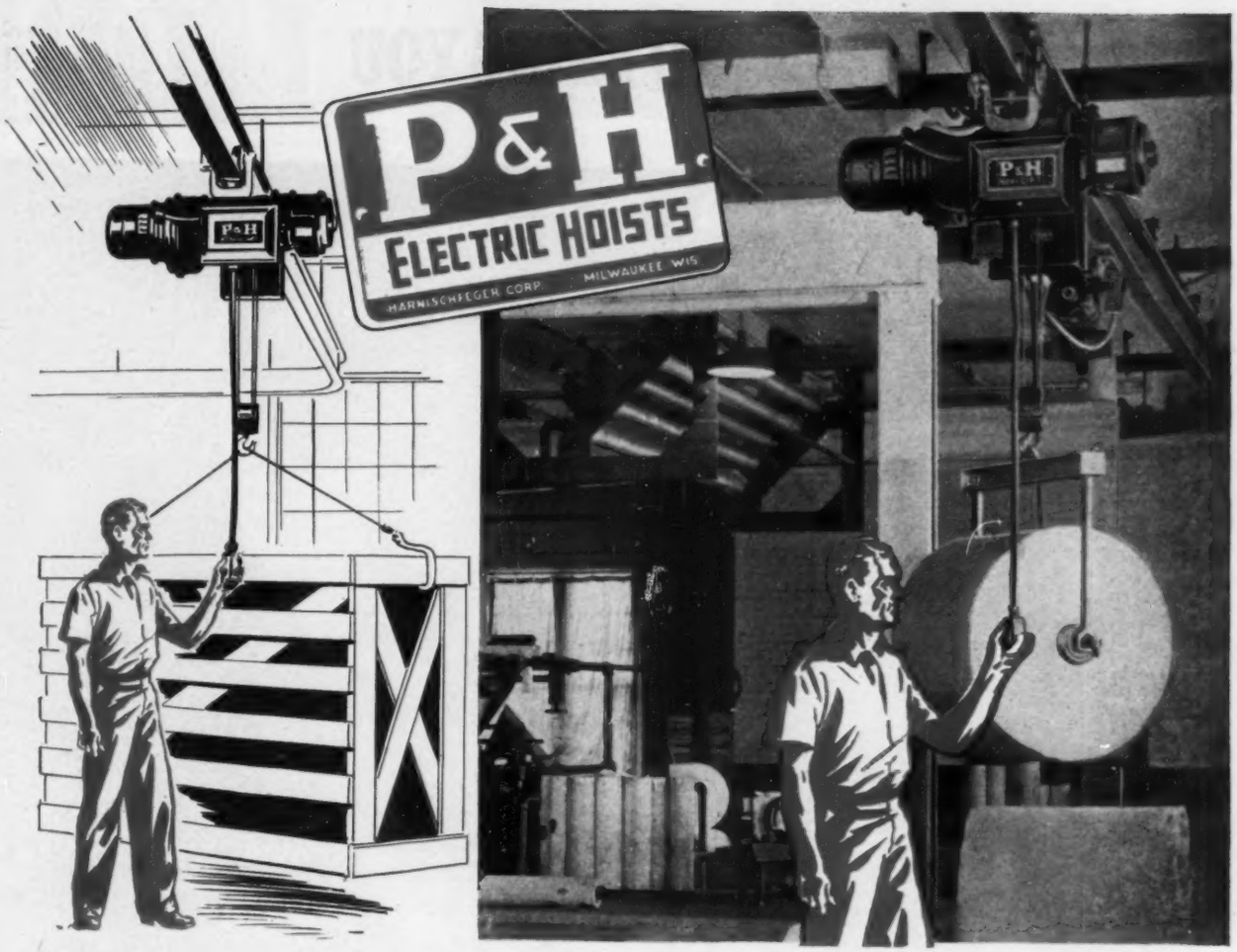
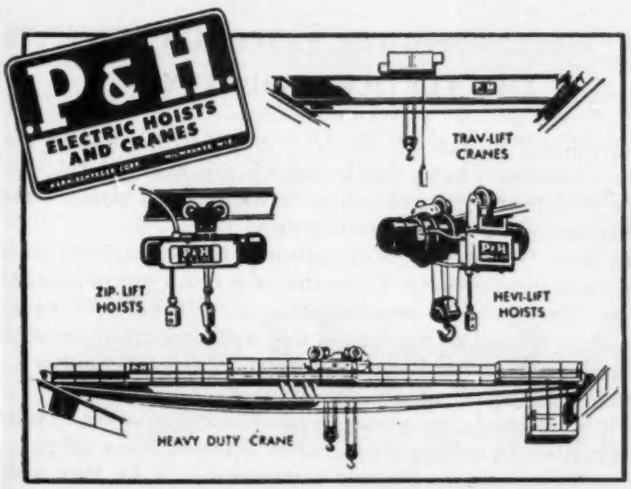


ONE MAN handles your biggest loads when textiles move "*Thru-the-Air!*"

The man pushes buttons — the P&H Electric Hoist does the work. Without effort, without delay, heavy loads are lifted, moved, "spotted" into place. That's *thru-the-air* handling!

Around textile mills, no other form of handling does so much to speed production, save floor space. None is cleaner. And none is so adaptable to *all* textile operations. Many mills employ thru-the-air handling from the time materials enter the plant till the finished product leaves — and they save money with every move.

See how these savings apply to your plant. Talk it over with a P&H Hoist Engineer. If you wish further information, write us.



P&H

ELECTRIC HOISTS

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HOISTS • WELDING ELECTRODES • MOTORS P&H EXCAVATORS • ELECTRIC CRANES • ARC WELDERS

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TO BRING YOU MORE

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HOW WESTINGHOUSE RESEARCH BENEFITS THE TEXTILE INDUSTRY

Westinghouse research has made many contributions to the Textile Industry. These developments are the natural outgrowth of a *working* partnership, formed at the time of the early beginnings of mill electrification.

More than 50 years of Westinghouse textile experience is behind each development. From the new multi-motor slasher drive to *Precipitron, the electronic air cleaner—Westinghouse offers related equipment to step up production through better and healthier working conditions . . . uniform quality . . . with lower maintenance per dollar invested.

You'll be assured of *practical* and *economical* answers to your textile problem by calling your nearest Westinghouse office . . . or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-94756

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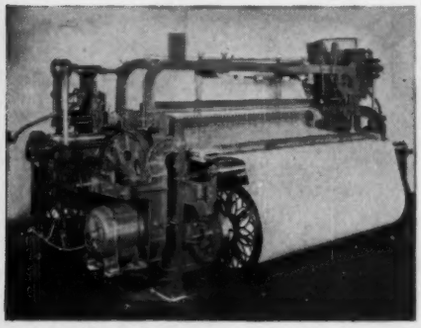
PRODUCTIVE POWER

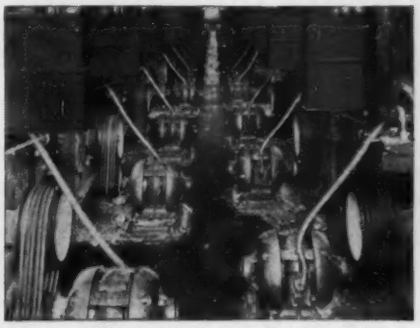
WESTINGHOUSE RESEARCH HAS ONE GOAL: TO HELP YOU PRODUCE FASTER, CHEAPER, BETTER, ELECTRICALLY

New ideas, new processes, new material for making electrical power more productive, flow steadily from the famous Westinghouse Research Laboratories. Many of these developments are at work now in *your* industry...developments—in electricity, in electronics, in processing—which promise many new advancements to help you produce *faster, cheaper, better,* electrically.

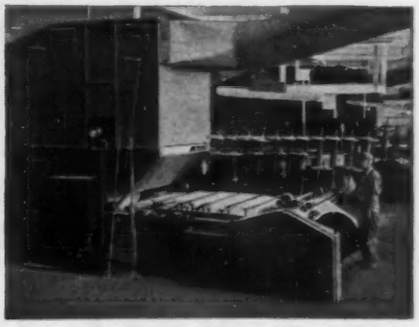
This broad basic research is an important added value to consider when you buy electrical equipment. A complete, separate Westinghouse Textile Industry Department, staffed by engineers intimately acquainted with Textile Industry problems, assures the prompt and *practical* application of new Westinghouse research developments to your special production techniques. Here are 6 Westinghouse contributions to the Textile Industry:



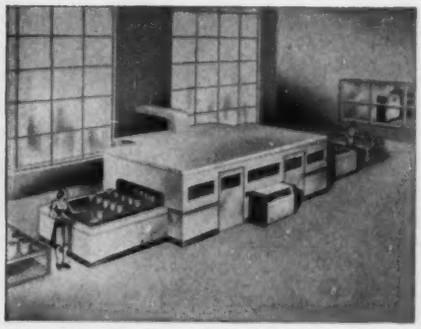
LOOM MOTORS—Quiet, cool, smooth-running motors that cut down radiation heating of your weave rooms—especially designed for peak output. This 1½ hp loom motor drives a modern woolen and worsted loom.



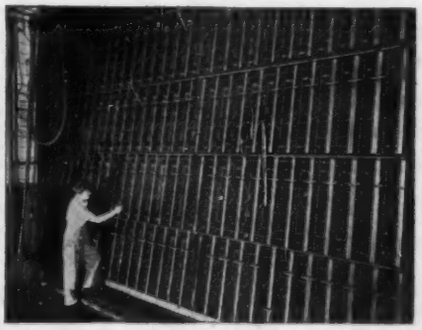
LINT-FREE MOTORS—"The cleanest running motor for textile service"—keeps its insides free of lint because it has *smooth* contours in the path of air circulation. These Westinghouse Lint-Free Motors drive spinning frames at high speed.



MULTI-MOTOR SLASHER DRIVE—The first major improvement in slasher drives for several decades. Rototrol is built into the system to guarantee uniform tension control . . . provides uniform yarn tension—diameter—beam density—better filler yarn spacing, less breakage, more warp on beam.



RADIO-FREQUENCY HEATING—Cuts twist setting and drying time, cake drying and dye package drying to a fraction of that required by conventional methods. Shown is a typical rayon dryer. Note control station at front of dryer.



PRECIPITRON—Keeps air clean and healthy—no "mill room fever"—picks out air-borne particles as small as 1/250,000 inch—eliminates dust, lint, soot, fumes, oil mist and smoke from the spinning, winding, weaving and drying operations—increases top-grade production.

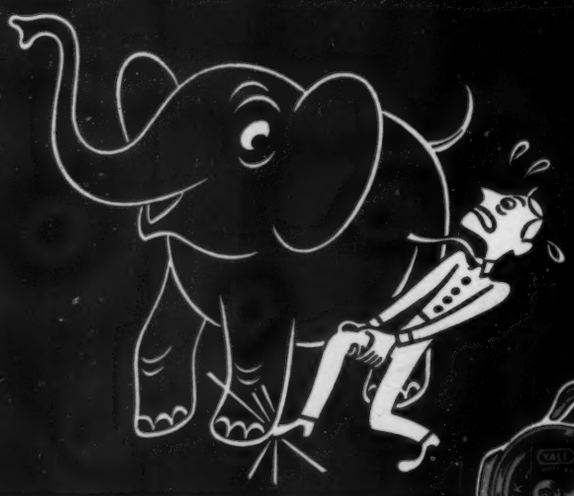
LIGHTING—Modern fluorescent lighting provides maximum "see-ability" in this textile mill. Westinghouse "planned lighting" is added proof of the value of single-source responsibility.

Westinghouse

PLANTS IN 25 CITIES... OFFICES EVERYWHERE

MORE PRODUCTIVE POWER FOR INDUSTRY

GET A HOIST !



A YALE HOIST

Are you pinned down by mammoth production costs that muscles can't budge? Then get out from under with a Yale Spur-Geared Hand Hoist.

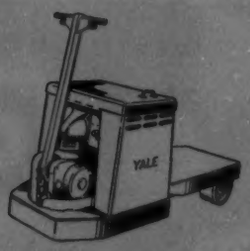
It will lift more tons per day, more efficiently at less cost per ton than a crew of muscle men. Capacities from ¼ to 40 tons. Consult your local telephone Directory for the mill supply distributor nearest you, or send for catalog—SG-T. The Yale & Towne Mfg. Co., 4543 Tacony St., Phila. 24, Pa.

TOOLS THAT KEEP INDUSTRY "ON THE MOVE"

YALE

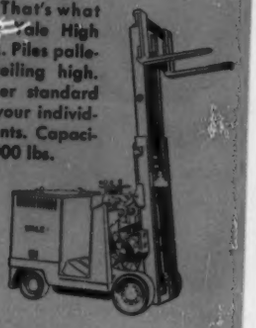
SCALES
HAND AND ELECTRIC HOISTS
HAND LIFT AND ELECTRIC TRUCKS

"ON THE MOVE" WITH YALE

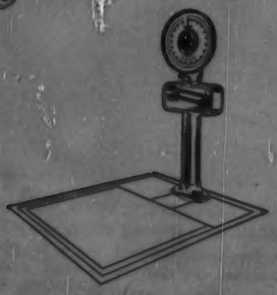


NEWEST ADDITION to the Yale line is the Worksaver. It travels and lifts by electric power. Has 2 forward and reverse speeds. 7 models, with capacities from 1,000 to 6,000 lbs.

"MONEY SAVING SPACE SAVER" . . . That's what users call the Yale High Lift Fork Truck. Piles palletized loads ceiling high. Scores of other standard models to fit your individual requirements. Capacities up to 60,000 lbs.



HANDLING MORE MATERIAL with less effort is routine for Yale Hand Lift Trucks. Wide range of models. Single and multiple stroke; mechanical and hydraulic lift. Capacities from 1,000 to 20,000 lbs.



YALE OFFERS NEW SCALE LINE—for the weighing, counting, batching and testing of all kinds of materials. They cut weighing time, give you prolonged accuracy, lowest possible maintenance, increased scale life. With capacities up to 60,000 lbs., Yale Scales meet all industrial needs.

Then, as now, COLOR sold textiles

In 18th century Europe, tradesmen offered their wares to madame during her morning toilette. Among the first to be admitted were sellers of colored fabrics from Lyons, Spitalfields and the Far East. Then, as now, color sold textiles.

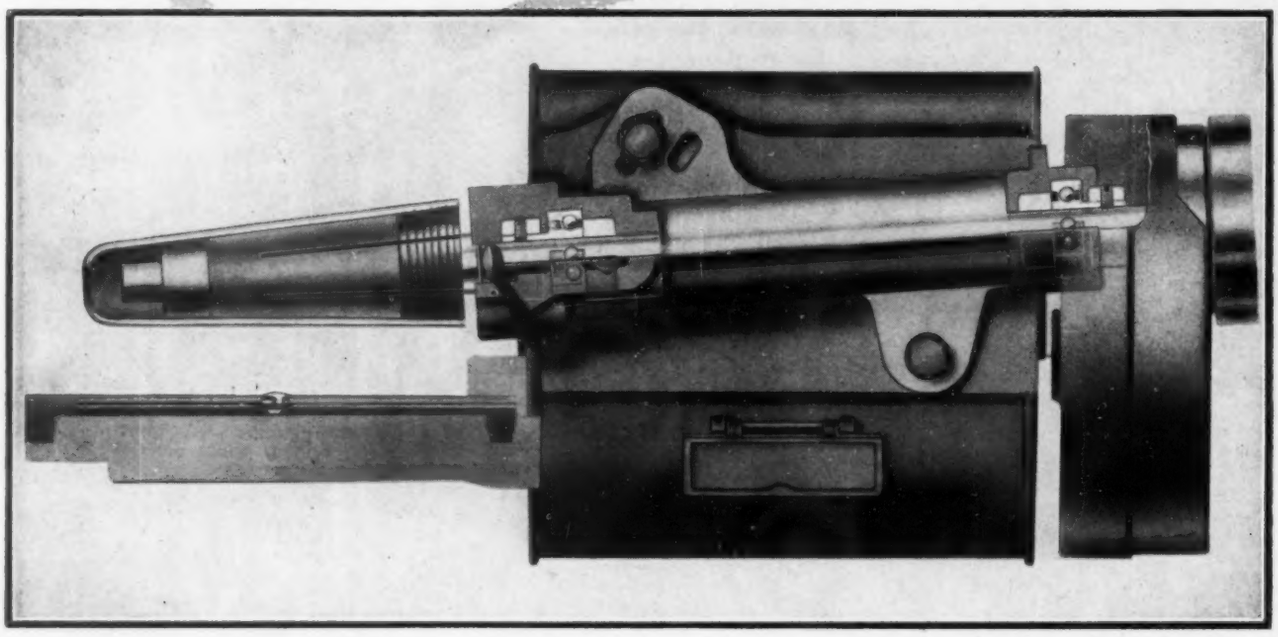
Franklin Process

LARGEST PACKAGE DYERS IN THE WORLD

PROVIDENCE • PHILADELPHIA • GREENVILLE • CHATTANOOGA

New York Representative, 40 Worth St.

LESS HORSEPOWER— LESS SPINDLE REPLACEMENT

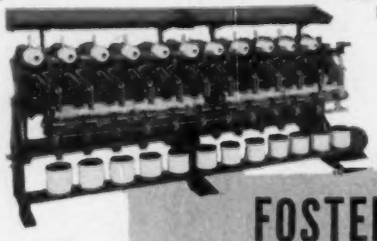


More for Your Money with FOSTER MODEL 75

THE FOSTER MODEL 75 is equipped with ball bearing spindles that effectively reduce power consumption so that a 30 spindle machine requires only one 2 h.p. motor. In addition, the ball bearing spindle improves the mechanical performance of the winder, protects the yarn from oil spots, and operates indefinitely without replacement. These characteristics add up to more for your money with Foster Model 75.

OTHER IMPORTANT FEATURES OF THE MODEL 75 ARE AS FOLLOWS:

1. Winds standard Foster convex base cones, or, with special added attachment, pineapple cones.
2. When equipped to wind pineapple cones the starting traverse may be varied between 4" and 6".
3. Depending on type of yarn and other conditions, cone density may also be varied between 40 and 70 by Durometer reading.
4. A slow starting device prevents yarn strain.
5. Total enclosure of lubricated parts prevents yarn soilage.



FOSTER MACHINE CO.
WESTFIELD, MASSACHUSETTS
Southern Office — Johnston Bldg., Charlotte, N. C.
Canadian Representative — Ross Whitehead & Co., Ltd., University Tower Bldg., 660 Ste. Catherine St., West, Montreal, Quebec
Muschamp Taylor Limited, Manchester, England

BULLETIN A-92-A ON REQUEST

FOSTER MODEL 75

For Winding Nylon, Rayon, Silk and Cotton Thread Yarns

Put your finger on many savings by

Owning Your Own

PRIVATE AUTOMATIC TELEPHONE SYSTEM

Yes—your company CAN own its own private automatic telephone system—and pay for it out of savings in as few as two, three or four years.

You will save by reducing your outside telephone bills. You will save time—key people can spend more time at their desks. You save time by holding "telephone conferences" with all connected personnel. You keep your rented equipment open for outside calls. You save customers' time—build good will — by using the private system to get requested information, and passing it on immediately to the customer on the outside line — no "I'll-call-you-back" delays. You have better control over outside personal calls—reducing wasted time and the cost of such calls.

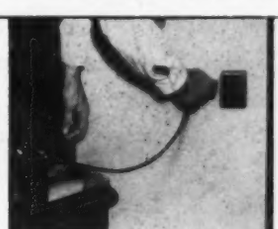
The system that will assure you these savings at their maximum is the Kellogg Select-O-Phone. Compare the features — get the proof in facts and figures. The coupon will bring them to you.

BEFORE YOU BUY, GET ALL THE FACTS— MAIL COUPON TODAY

ONLY KELLOGG SELECT-O-PHONE GIVES YOU ALL THESE BENEFITS

☐ **A REAL TELEPHONE SYSTEM**

Kellogg Select-O-Phone is a full-fledged TELEPHONE system not a loudspeaker system. Built by Kellogg—now in its 51st year of developing and building the finest telephone equipment.



☐ **EASY, LOW-COST EXPANSION**

Expand as you wish—one telephone at a time—up to 36 telephones. Needs only a simple one 3-conductor wire for each station. No extra wiring needed in switching equipment.

☐ **100% CONFERENCE FACILITIES**

Kellogg Select-O-Phone is the ONLY system that permits EVERY telephone to be connected in a "conference" circuit. ANY telephone can originate a conference. And EVERY telephone can reach every other.

- ☐ "Name Touch" Executive station available if desired.
- ☐ Installation cost is negligible, compared to other systems—needs only simple 3-conductor wire to each telephone.
- ☐ Long Life—Select-O-Phone systems have been in use as long as 30 years.
- ☐ Complete privacy and secrecy—and every connected person has a TELEPHONE — not a shouting loudspeaker.
- ☐ Central switching equipment is extremely compact — can be wall mounted. No separate room needed.
- ☐ Complete general call or individual code call system—also fire or burglar alarm signal—can be incorporated in Select-O-Phone system.
- ☐ Permits unlimited simultaneous conversations.
- ☐ Fully automatic — no operator needed.

KELLOGG SELECT-O-PHONE

Private Automatic Telephone and Paging System

KELLOGG SWITCHBOARD & SUPPLY COMPANY

310 West 6th Street • Kansas City 6, Missouri

Select-O-Phone Division
Kellogg Switchboard & Supply Co.
310 West 6th Street, Kansas City 6, Missouri

Send me full information on how the Select-O-Phone dial telephone system can save time and money for our company.

Name.....

Company.....

Address.....

City and State.....

ASSEMBLING REQUIRES NO SPECIAL FITTING

• Assembling is greatly simplified by Lunkenheimer precision production... parts are so accurately made that special fitting isn't necessary.

LUNKENHEIMER

Precision Workmanship

■ ■ ■

SUPER ACCURACY IN EVERY PART ...LONGER SERVICE LIFE

Fig. 2125
Bronze
Double Disc
Gate

Fig. 1430
Iron Body
Gate

Fig. 2228
Bronze Union Bonnet
Gate Valve

• You can't fool maintenance men on valve quality. They know that when a valve has a much longer than average service life, that valve has superior accuracy and precision built into it from handwheel to pipe threads. Such valves are the only kind that have ever been produced by Lunkenheimer. For over three quarters of a century, the Lunkenheimer quality ideal has won ever widening acceptance until today it is a recognized tradition in American industry.

Lunkenheimer quality is the balanced combination of many factors. Among them are finest raw materials approved by constant testing and research... sound, advanced design... highly skilled workmanship... absolute accuracy... perfect alignment of all parts.

As an inevitable result—wherever you find Lunkenheimer Valves you find maintenance cost records consistently lower.

Your LUNKENHEIMER Distributor

—is an important link in the nationwide Lunkenheimer chain of better, more efficient, more reliable valve service. He is fully equipped to assist in the solution of valve maintenance and operating problems. In addition, he can make prompt arrangements to have a Lunkenheimer Engineer call at the plant whenever technical valve engineering knowledge is required.

ESTABLISHED 1862

THE LUNKENHEIMER CO.

—"QUALITY"—

CINCINNATI 14, OHIO. U. S. A.

NEW YORK 13 • CHICAGO 6 • BOSTON 10 • PHILADELPHIA 34 • EXPORT DEPT. 318-322 HUDSON ST., NEW YORK 13, N. Y.

What's the long-term story on insulation costs?

● In the long run, your insulation will cost you less, in both dollars and trouble, if you use PC Foamglas insulation.

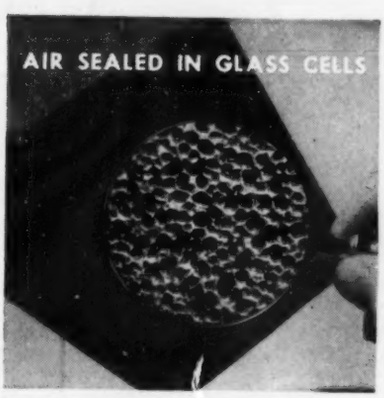
When you insulate with Foamglas, first cost is last cost. No constantly recurring expenses for repair, replacement, maintenance. When installed according to our specifications for recommended applications, PC Foamglas retains its original insulating efficiency, *permanently*.

Being glass, Foamglas is highly resistant to moisture, vapors and fumes which cause many insulating materials to deteriorate. Foamglas helps to maintain desired temperature levels, to minimize condensation. It is ideal for use in roofs, corewalls, floors and ceilings.

Consult us about PC Foamglas insulation for your special requirements. Meanwhile send the coupon for our free booklets of valuable information about this unique material. Pittsburgh Corning Corporation also makes PC Glass Blocks.

When you insulate with FOAMGLAS you insulate FOR GOOD.

WHEN OUTSIDE WALLS are insulated with PC Foamglas, the material can be easily cut to fit around pipes, conduits and other obstructions. In core walls of all sorts of buildings, PC Foamglas minimizes condensation, reduces heat loss, eases the load on heating and air-conditioning equipment.



THE MAGNIFIED CROSS SECTION of PC Foamglas shows its cellular construction. It is literally a foam of glass, solidified into big, strong, rigid blocks. In the millions of minute cells of glass-enclosed air, lies the secret of its insulating value.

Pittsburgh Corning Corporation
Room 408-S, 632 Duquesne Way
Pittsburgh 22, Pa.

Please send me without obligation, your free booklets on the use of PC Foamglas insulation for:

Roofs_____ Walls_____ Floors_____

Name_____

Address_____

City_____ State_____

PITTSBURGH ® PC CORNING **FOAMGLAS INSULATION**

FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS.

It's the SIDES of a V-Belt

that GRIP the Pulley Pick-Up the LOAD and Really Get the WEAR!

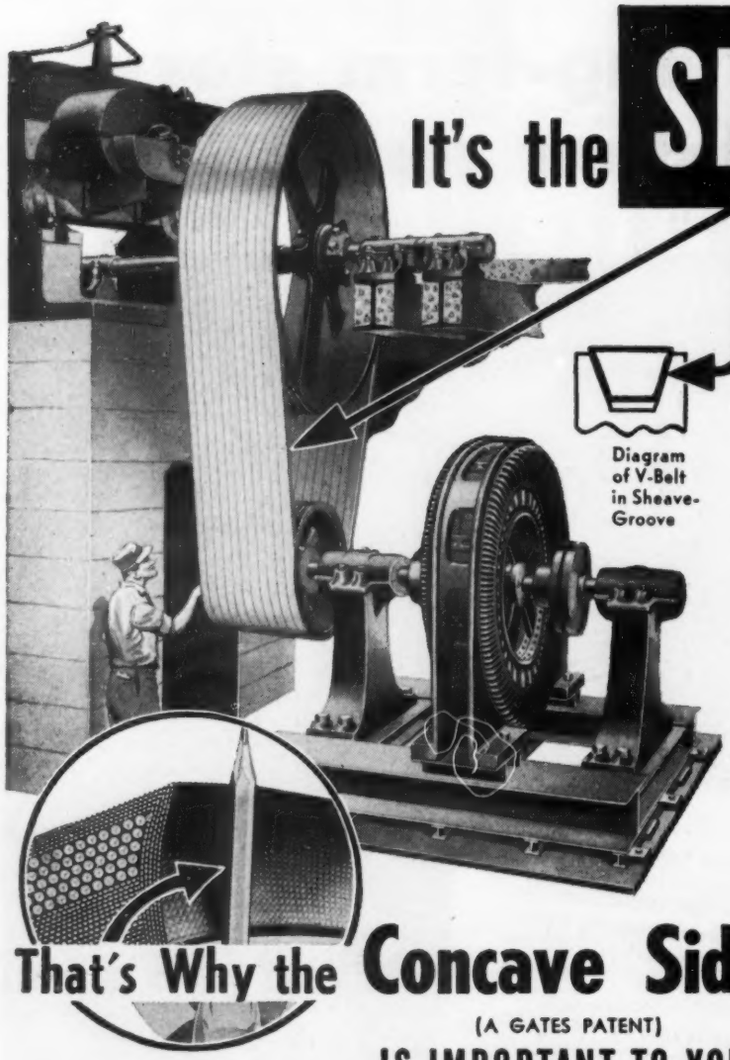


Diagram of V-Belt in Sheave-Groove

Every ounce of load a V-Belt carries must first be picked up by the sides of the belt. Clearly so, because only the sides come into contact with the pulley! The sides do all the GRIPPING on the pulley. The sides pick up the load. They transmit that load to the belt as a whole. And then, once more, the sides—and the sides alone—grip the driven pulley and deliver the power to it. Finally, the sides get ALL THE WEAR against the sheave-groove wall.

That is why you have always noticed that the sidewall of the ordinary V-Belt is the part that wears out first.

That's Why the Concave Side

(A GATES PATENT)

IS IMPORTANT TO YOU!

Clearly, since the sidewall is the part that wears out first, anything that prolongs the life of the sidewall will lengthen the life of the belt—and that's why the patented Concave Side is important to you.

The simple diagrams on the right show exactly why the ordinary, straight-sided V-Belt gets excessive wear along the middle of the sides. They show also why the Patented Concave Side greatly reduces sidewall wear in Gates Vulco Ropes. That is the simple reason why your Gates Vulco Ropes are giving you so much longer service than any straight-sided V-Belts can possibly give.

and the CONCAVE SIDE is more important NOW than ever before

Now that Gates SPECIALIZED Research has resulted in Super Vulco Ropes capable of carrying much heavier loads—fully 40% higher horsepower ratings—the sidewall of the belt is called upon to do even more work in transmitting these heavier loads to the pulley. Naturally, with heavier loading on the sidewall, the life-prolonging Concave Side is more important now than ever before!

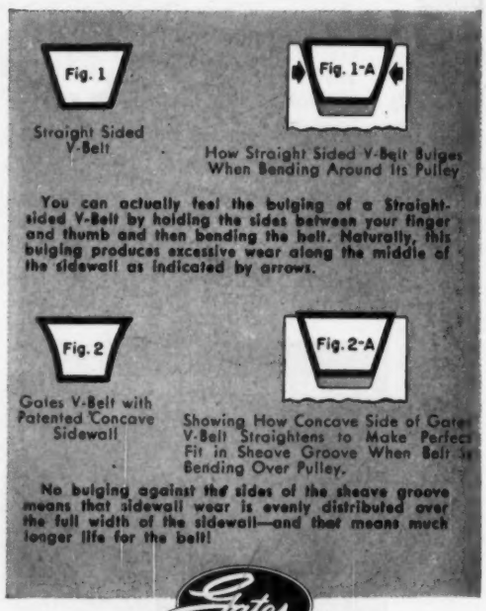


Fig. 1
Straight Sided V-Belt
Fig. 1-A
How Straight Sided V-Belt Bulges When Bending Around Its Pulley
You can actually feel the bulging of a Straight-sided V-Belt by holding the sides between your finger and thumb and then bending the belt. Naturally, this bulging produces excessive wear along the middle of the sidewall as indicated by arrows.
Fig. 2
Gates V-Belt with Patented Concave Sidewall
Fig. 2-A
Showing How Concave Side of Gates V-Belt Straightens to Make Perfect Fit in Sheave Groove When Belt Is Bending Over Pulley.
No bulging against the sides of the sheave groove means that sidewall wear is evenly distributed over the full width of the sidewall—and that means much longer life for the belt!

Gates

The Mark of SPECIALIZED Research

482

GATES VULCO ROPE DRIVES

Engineering Offices and Jobber Stocks IN ALL INDUSTRIAL CENTERS at the U. S. and 71 Foreign Countries

THE GATES RUBBER COMPANY

"The World's Largest Makers of V-Belts"

DENVER, U. S. A.

better SERVICE through research

better SERVICE through research

Extraction apparatus, in the Textile Laboratory of the A. E. Staley Manufacturing Company, used to determine moisture and fat content of sizing formulas and size compounds.

•

Staley's completely equipped, modern laboratories—staffed by skilled chemists and highly trained technicians—are at your service... Ready to help you with your sizing problems. Every Staley representative is thoroughly familiar with the capabilities of the laboratories—knows exactly how they can serve you through analysis, comparison and recommendation.

Created in these laboratories—and under strict Control Laboratory supervision during every step of the processing—Staley's complete line of Textile Starches makes it possible for you to select the proper Staley Starch for every sizing requirement.

If you are not a Staley customer, now is the time to get acquainted with our prompt service and complete cooperation. Write, wire or phone for detailed information.

STALEY STARCHES

A. E. STALEY MFG. COMPANY

Staley's CORN AND SOY BEAN PRODUCTS

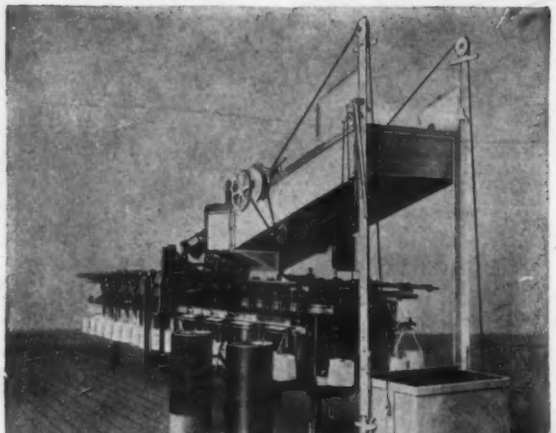
ATLANTA • SPARTANBURG
DALLAS • PHILADELPHIA
CHICAGO • NEW YORK
BOSTON • SAN FRANCISCO

DECATUR, ILLINOIS

LEADERS---in the AUTOMATIC WINDING FIELD

The only Automatic Winder that will wind the standard 6" traverse on cheeses, warping cones, knitting cones, etc.

Production 900 to 1000 bobbins per hour with one operator.



The only fully automatic loom bobbin winder. The empty supply quills and the full wound quills are handled automatically without attention by the operator.

Production 2000 or more quills per hour per operator; cotton, spun fiber, worsted, linen, paper, and filament yarns.

Dyeing and drying equipment for worsted and cut fiber top and for yarns.

ABBOTT MACHINE COMPANY

WILTON, N. H.

Southern Office — *Greenville, S. C.*

Safe Shipments... Substantial Savings!

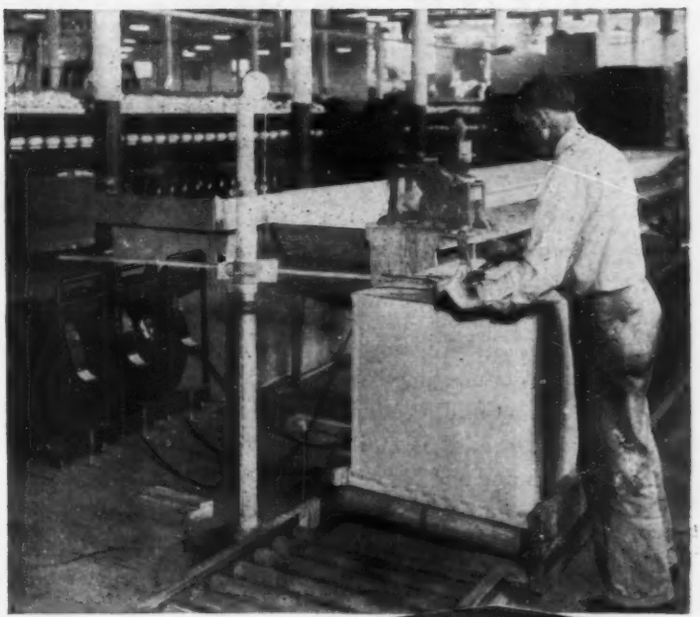
Acme Steelstrap reduces the high cost of packaging textiles while providing sure protection for your shipments.

Packaging costs come high, both in materials and in labor.

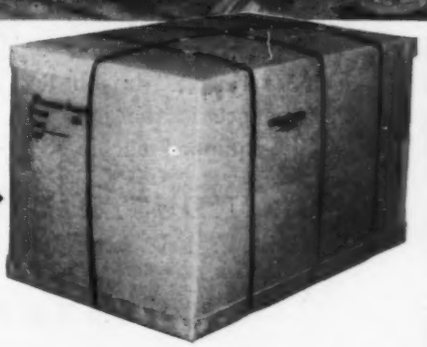
Acme Steelstrap methods reduce such costs, enable you to pack your merchandise safely and economically in a fiberboard box... strap it and ship it as a bale. You know that it's "Bound to Get There" without damage or loss.

When any type of container is reinforced with Acme Steelstrap you are assured of the product protection your shipments require. Steelstrap is available in the widths and thicknesses you need. Recommendations will be provided by Acme Shipping Specialists without obligation to you.

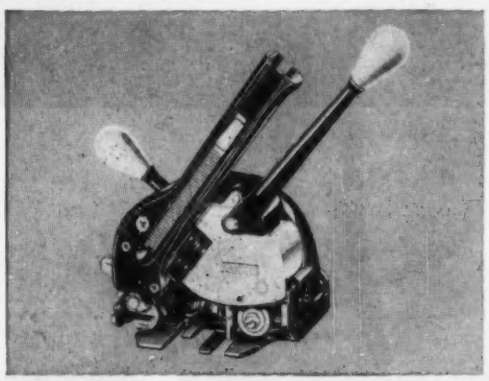
Let Acme show you how to safeguard merchandise and cut costs. Clip and mail the coupon today for free booklets on packaging textiles for shipment with Acme Steelstrap.



1. Fiberboard box containing textiles being prepared for shipment with Acme Steelstrap.



2. Fiberboard box ready for shipment . . . "Bound to Get There" with Acme Steelstrap. Merchandise shipped as a bale . . . with lower cost and better product protection.



More Savings Ahead for Acme Steelstrap Users—No. 3 Steelstrapper, the lightest tool made, is now available. Magazine holds 100 seals. Tensions, seals and cuts the strap in one operation. Small base requires only 5-inch strapping surface. Two levers working in opposite directions make for better balance and easier handling.

MAIL THIS COUPON TODAY

Acme Steel Company, Dept. TI-28
2838 Archer Avenue
Chicago 8, Illinois

Gentlemen: Please send me your free booklet on packaging textiles for shipment.

Name.....

Company.....

Address.....

City.....Zone.....State.....

ACME STEEL COMPANY

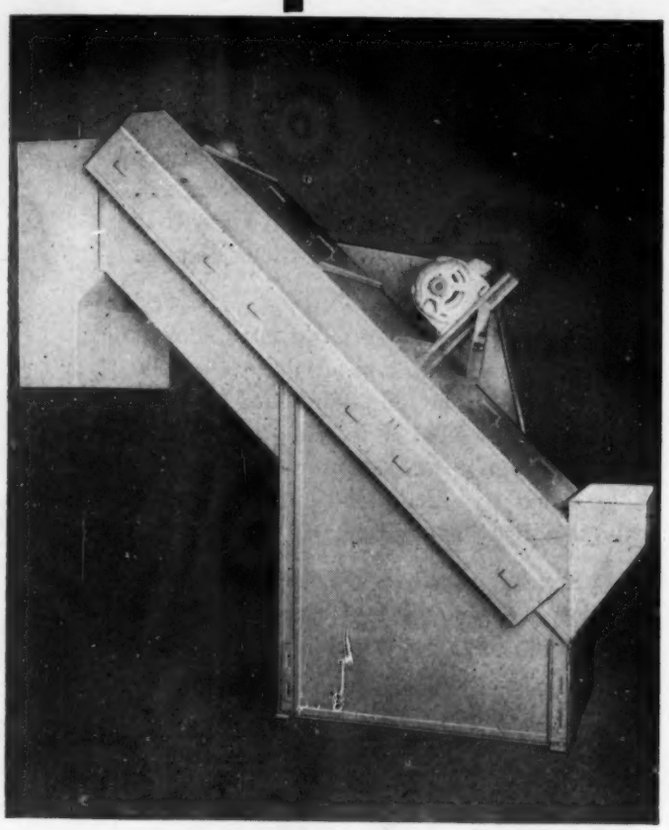
ACME STEEL CO. CHICAGO

NEW YORK 7 ATLANTA CHICAGO 8 LOS ANGELES 11

SELF-ALIGNMENT

For *Textile* Machines

● *Built by*
THE CENTRIF-AIR MACHINE CO., INC.



When the self-aligning bearing was originated by SKF, the Textile Industry was one of the first to use it. Today, SKF Self-Aligning Ball Bearings are on textile machines everywhere. An example is this Elevator Type SUPERIOR Opening and Blending Machine used for opening and blending synthetic fibers, cotton and wool. The self-aligning feature of SKF Ball Bearings on six beater cylinders prevents binding and eliminates shaft strains. When *you* select bearings for your products, remember this: The job that calls for Performance is the job that demands SKF-equipped machines. 6382

SKF INDUSTRIES, INC.
Front St. & Erie Ave., Phila. 32, Pa.

Vanesta

THE STARCH STABILIZER

For Textile Sizing & Printing

Holds Size Over Weekends

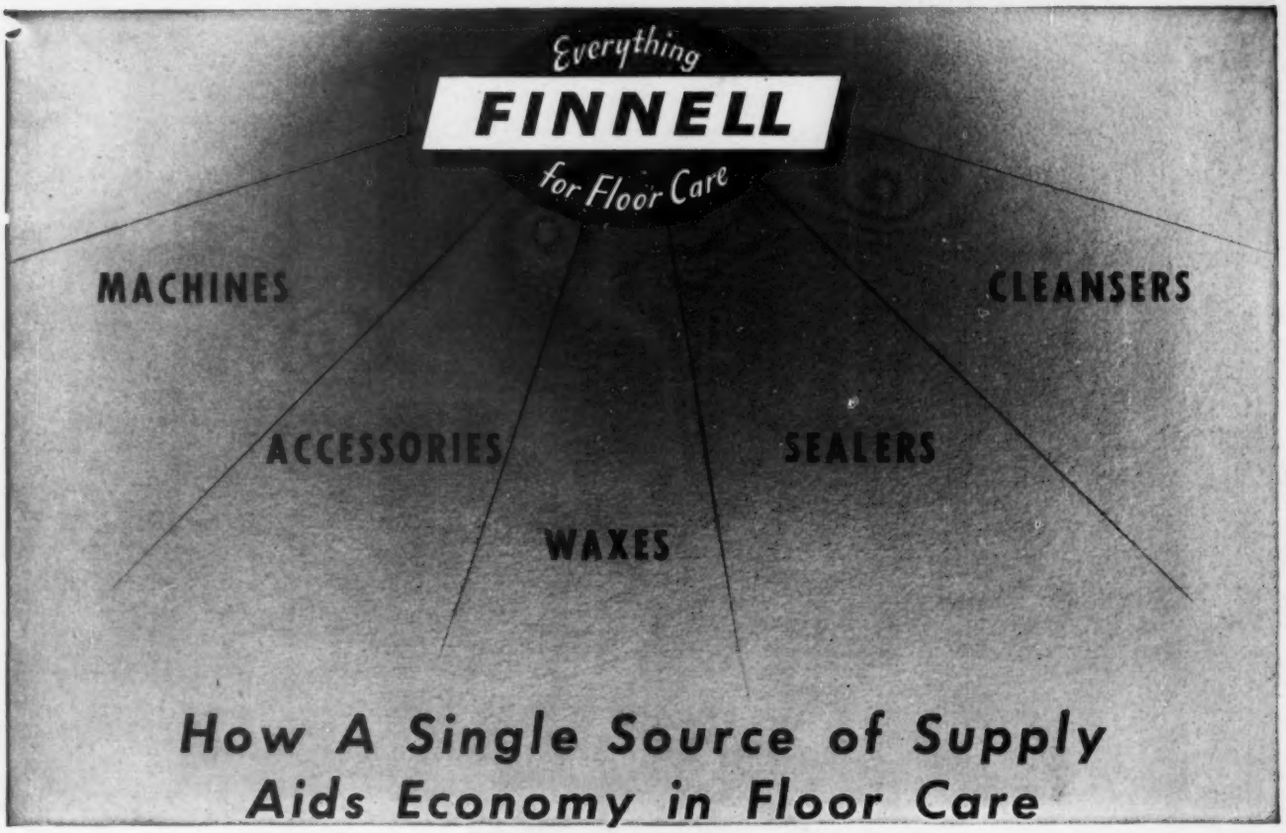
Maintains Fluidity

Stops Gelling

Sample on request

R. T. VANDERBILT CO., INC.

230 Park Avenue, New York 17, N. Y.



How A Single Source of Supply Aids Economy in Floor Care

It's convenient to buy floor-maintenance equipment and related products from one source, but a single source of supply such as *Finnell* offers many more advantages. Serving all industries, *Finnell* makes equipment for every type of floor care . . . for all floors . . . all areas. From the *Finnell* line you can choose the equipment that provides the maximum coverage for your particular floors—whether maintenance calls for wet scrubbing, dry scrubbing, or dry cleaning . . . or for waxing or polishing.

Finnell also makes a full line of Cleansers specially developed for the greater speed of mechanical-scrubbing. The cleaning action of *Finnell* Cleansers *keeps pace* with the speed of the machine. This cuts operating time, which in turn reduces labor costs and saves on brushes.

In waxing, too, co-ordinated economy can be effected, by doing the job mechanically with a portable *Finnell* and *Finnell-Kote*, the solid wax that's applied hot. This process produces a finish unique in wearing and protective qualities, and hence is more economical on a year-to-year cost basis.

In addition to a full line of *Machines, Cleansers,* and *Waxes, Finnell* makes several types of *Sealers* . . . also *Mop Trucks, Steel-Wool Pads,* and other accessories. The nearby *Finnell Floor Specialist and Engineer* is readily available for free floor survey, demonstration, or consultation . . . and for training your maintenance operators in the proper use of *Finnell* equipment. Phone or write nearest *Finnell* branch or Finnell System, Inc., 1302 East Street, Elkhart, Indiana. Canadian Office: Ottawa, Ontario.

* * * *

The *Finnell* illustrated at left is a *Self-Propelled Combination Scrubber-Vacuum* for use on large-area floors. A complete cleaning unit *all in one*, it applies the cleanser, scrubs, rinses if required, and picks up. Has a cleaning capacity up to 8,750 sq. ft. per hour!

FINNELL SYSTEM, INC.

Pioneers and Specialists in

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES IN ALL PRINCIPAL CITIES

KEEP YOUR SHUTTLES IN STEP WITH YOUR *HIGH SPEED* LOOM REQUIREMENTS

Southern Shuttles

Have Designed, Engineered and Manufactured a Line of Shuttles that will take all the punishment you can give them...

They possess every Outstanding Requirement

Material —

Made of our tough, strong, durable Tempered Dogwood.

Shuttle Points —

Another innovation of Southern Engineers, which makes the hardened steel point and the Dogwood to which it becomes a part—one definite unit—no loosening—no coming out.

Outlet "U's"—or Bushings

Scientifically carburized and heat treated to give maximum flexibility and strength. Becomes a positive part of body of Shuttle.

Patented #108 Eye— Features

1. Streamlining for quicker threading.
2. Faster delivery of yarn to outlet.
3. Complete elimination of tying and looping.
4. Uniquely machined scroll which controls ballooning and tension.
5. Solid one-piece casting.

Bobbin Tip Side Clearance —

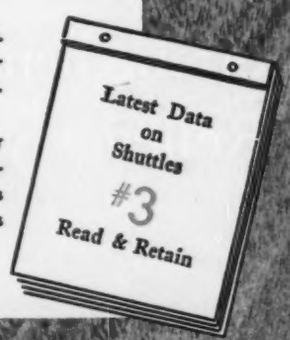
Prevents filling breakage caused by bobbin slap against shuttle wall.

High Speed Spring Assembly

Strong, flexible and durable. Specially heat treated—designed to withstand breakage.

Don't Use An *Ordinary* Shuttle On Your High Speed Looms—Use the One Specifically Designed by Shuttle Experts and Made to Withstand the Gaff. It is cheaper in the end.

Send for literature.



Southern Shuttles Division

(Specialists and exclusive manufacturers of the latest and finest in Shuttles)

STEEL HEDDLE MFG. CO.

621 Byrd Ave. Greenville, S. C.

TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

the BIGGER the BEAM the BETTER

36" HEAD ON "D" LOOM

You Can Increase Yarn Capacity BY AS MUCH AS 444%

PRESENT LOOM BEAM DIAMETER — INCHES	INCREASED LOOM BEAM DIAMETER — INCHES											
	40	38	36	34	32	30	28	26	24	22	20	18
18	444.0	389.0	337.5	289.0	243.0	200.0	159.5	122.2	87.5	55.6	26.4	0
20	329.5	287.0	246.0	207.5	171.4	137.4	105.5	75.8	48.4	23.1	0	
22	249.0	214.2	181.3	150.0	120.5	92.8	66.9	42.8	26.5	0		
24	189.5	160.5	133.3	107.5	83.0	60.0	38.5	18.4	0			
26	144.4	120.0	96.8	75.0	54.4	35.0	16.9	0				
28	109.1	88.2	68.5	49.7	32.1	15.5	0					
30	81.0	63.0	45.8	29.6	14.4	0						
32	58.3	42.5	27.5	13.4	0							
34	39.6	25.7	12.5	0								
36	24.6	11.7	0									
38	11.1	0										
40	0											

EXAMPLE:

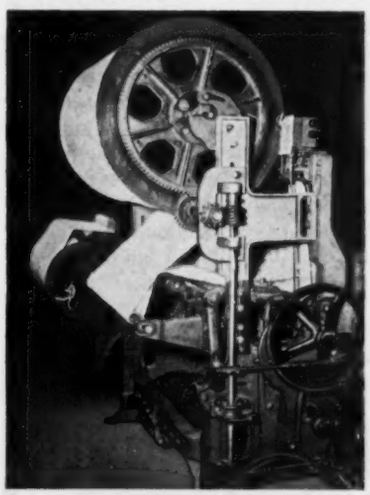
PRESENT BEAM — 20" DIA., 750 YARDS
LARGE BEAM — 26" DIA.
PERCENT INCREASE 75.8
ADD 100 to .758 1.758
CACAPITY OF 26" BEAM 750 x 1.75 1319 YARDS

REDUCE RUN-OUTS! CUT HANDLING! SAVE LABOR! INCREASE PROFITS!

Look for increased efficiency and PROFITS when you equip your mill to run larger beams and longer warp.

Large beams with greater yarn capacity increase loom running time . . . reduce runouts. Time-consuming warp tying and beam handling—while machines stand idle—are cut to a minimum.

Step up slasher and loom room efficiency and profits. Install larger beam heads now. Built for long life, these high grade heads are expertly designed and machined. Barrels of thoroughly seasoned woods turned straight and true . . . sealed against moisture.



BIGGER BEAMS

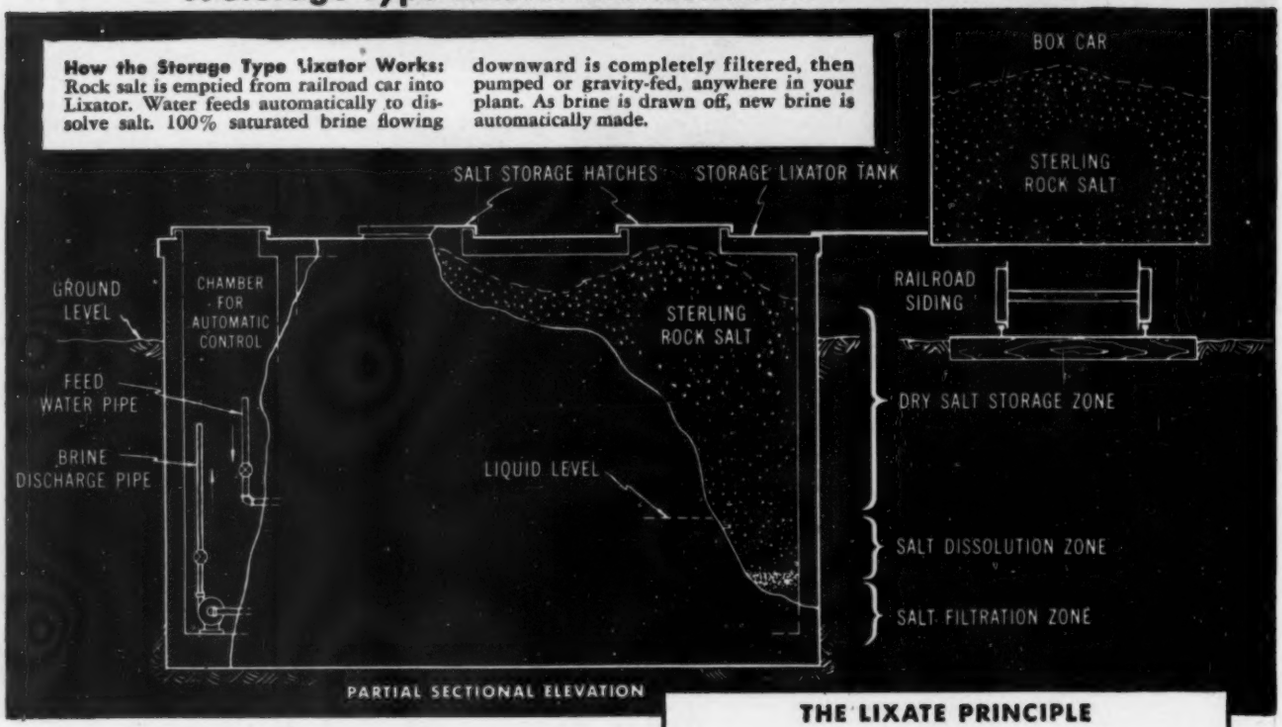
can be easily installed on top of the looms in weave sheds with narrow alleys. Operated with Roper, Bartlett or independent let-off

WEST POINT FOUNDRY & MACHINE CO.

(Balson-Cook Company, Owners)

WEST POINT, GEORGIA

A Storage Type Lixator Unit Suitable for a Textile Mill


How the Storage Type Lixator Works: Rock salt is emptied from railroad car into Lixator. Water feeds automatically to dissolve salt. 100% saturated brine flowing downward is completely filtered, then pumped or gravity-fed, anywhere in your plant. As brine is drawn off, new brine is automatically made.
BOX CAR
STERLING ROCK SALT
SALT STORAGE HATCHES
STORAGE LIXATOR TANK
GROUND LEVEL
CHAMBER FOR AUTOMATIC CONTROL
FEED WATER PIPE
BRINE DISCHARGE PIPE
STERLING ROCK SALT
LIQUID LEVEL
RAILROAD SIDING
DRY SALT STORAGE ZONE
SALT DISSOLUTION ZONE
SALT FILTRATION ZONE
PARTIAL SECTIONAL ELEVATION

DAN RIVER MILLS' Storage Type Lixator Produces 8000 Gallons of Saturated, Filtered Brine per hour

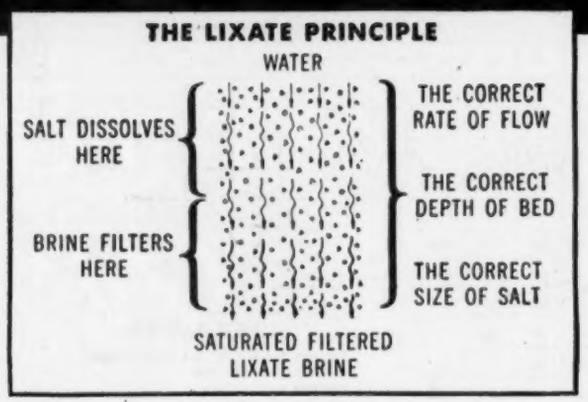
"It Paid for itself in One Year"

Says **W. B. CARROLL,**
Superintendent of Dyeing

Once, salt had to be handled *eight different times*—even before it was dissolved by hand labor into brine—at Dan River Mills, Riverside Division, Danville, Va.

Today, Sterling Rock Salt is unloaded from railroad cars into an 8000-gallon-per-hour Storage Type Lixator right beside the tracks. From the Lixator, 100% saturated, clean, crystal clear, self-filtered brine flows automatically by pipe to the nearby stock dyehouse... *and 3,700 feet across the Dan River to the suiting dyehouse.*

The entire installation paid for itself within a year, thanks to operating economies made possible by the expertly designed, International Storage Type Lixator.



With long years of experience behind them in cooperating with the textile industry, International engineers are thoroughly familiar with the uses of salt as brine in dyeing machines and vats and for regenerating zeolite water softeners. In every use the Storage Type Lixator eliminates salt handling and waste. Its brine making capacity always equals your needs. It is a completely automatic system, delivering the exact quantity of brine required at every point of use.

Full details of how the Storage Type Lixator can save you man-hours and money and boost your production efficiency will gladly be furnished. Simply fill out and send the attached coupon.

INTERNATIONAL SALT COMPANY, INC.
Dept. T1-2, Scranton, Pa.
Gentlemen:
I would like complete information about the Storage Type Lixator.

*Name*_____

*Firm*_____

*Street*_____

*City*_____ *State*_____

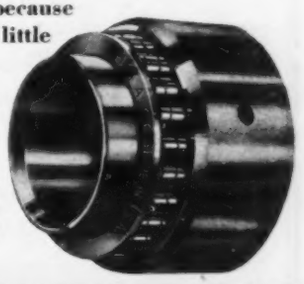
The **LIXATE** *Process*
Reg. U. S. Pat. Off.
for making brine
INTERNATIONAL SALT COMPANY, INC.
Scranton, Pa.

MY! MY!
This loom is so easy to operate it must be equipped with
HYATT ROLLER BEARINGS
RIGHT! You get bigger production with less hard work...I get higher loom efficiency*

*RIGHT! YOU CAN ALWAYS RELY ON

mill operators to do the smart thing: specify Hyatt Roller Bearings for crankshaft, cam shaft, rockershaft, take-up shaft, yarn beam and whip roll positions. ***They know that Hyatts mean all-around satisfaction.***

Less than half the effort is required to set the reed correctly to the fell of the cloth; no mark in the cloth occurs . . . New looms start up easily, and settings stay put . . . Transfer of bobbins continues to be accurately made, because rockershaft bearings maintain original centers...Bearings require very little lubricant, and oil or grease does not leak on fabric or floor . . . Maintenance? Practically none—even after as long as 15 years of service.



WRITE!

For information about Hyatt Roller Bearings for looms, preparatory and finishing machines of all kinds. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

HYATT ROLLER BEARINGS

PICKER REPAIR PARTS
For IMMEDIATE DELIVERY

We manufacture and keep on hand for immediate delivery a complete stock of repair parts for Kitson pickers. We can also furnish many parts, such as screens, ball bearings, aprons, and beaters, for other pickers.

In an emergency, a telephone call or telegram can have the needed repair parts at your plant the day after the order is placed.

Aldrich rebuilt pickers are exactly like new machines, and where it is not feasible to have your own pickers rebuilt, these can be exchanged for similar sections in our warehouse which can be rebuilt for you and installed with little or no interruption to production.

AldricH MachinE
Greenwood **WorkS** South Carolina

SANDOZ PRESENTS *The color achievement of the month*

Elizabethan Grey BY SUSKANA* FABRICS

Here is a color that might have been seen on opening night at the Globe for Shakespeare's newest play . . . or, today, at some function honoring the present Elizabeth. Pale as an echo, the loveliest grey since the Sixteenth Century, it's called—with traditional justice—Elizabethan Grey.

This soft, warm broadcloth is woven by Susquehanna Mills, manufacturers of Suskana* Fabrics for women's wear, men's wear, neckties and upholstery. And Susquehanna is one of a long list of mills that count on Sandoz for colors that compliment the cloth.

For a color like the one illustrated, Sandoz offers its . . .

METOMEGA CHROME GREY GL

a grey that is outstanding for its fastness to light, washing and perspiration. Mill men will like particularly its level dyeing properties by all chrome methods and its unique stability to decatizing—a finishing treatment that rules out many otherwise suitable colors.

For acid, chrome or direct dyes . . . or auxiliary chemicals . . . for both natural and synthetic fibres . . . be guided by the successful "color achievements" you see in these Sandoz advertisements.

*®

SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N. Y.

Application laboratories and stocks at Boston, Philadelphia, Charlotte, Los Angeles, Toronto. • Other branches at Providence, Paterson, Chicago.

SANDOZ *thinks ahead with textiles*

SANDOZ

"ROLL"-CALL

*shows top worsted mills winding with Roto-Coners**

Introduction of the all-metal (wear-resisting) rotary traverse allows mills winding the more abrasive yarns to increase winding room production with Roto-Coners*.

Today, an impressive list of mills testifies to the success of the Roto-Coner* in winding wool and worsted yarns.

The Rotary Traverse is a one-piece combination driving drum and traverse guide — precision grooved, dynamically balanced. By eliminating cams, it permits higher winding speeds (550 ypm for paper coning) and saves replacing fast-wearing parts. It needs no greasing, no adjustments, eliminates vibration.

And packages wound on the Roto-Coner* are free from imperfections and inequalities caused by slip drums, too small an angle of wind, and wear on reciprocating parts.

Read Bulletin 144 for more facts about America's fastest-selling winding machine.

UNIVERSAL WINDING COMPANY

Providence, Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center in the world.

23-7-11

LEESONA
REG. U.S. PAT. OFF.
ROTO-CONER*
Open-Wind Cones for Knitting
WARPING CONES — DYEING PACKAGES — PARALLEL TUBES FOR TWISTING

S-W COVERS BOTH SIDES of the MAINTENANCE PICTURE!

SAVE-LITE MILL WHITES FOR BETTER LIGHT!
S-W COLOR HARMONY FOR PLANT EFFICIENCY!
SHERWIN-WILLIAMS INDUSTRIAL FINISHES
SAVE-LITE WHITE
SHERWIN-WILLIAMS INDUSTRIAL FINISHES

1. SAVE-LITE

NEW IMPROVED WHITES

No matter *what* maintenance painting requirements may be in your plant, you can count on *one* of the Sherwin-Williams Save-Lites to give you the utmost in surface protection . . . *PLUS* lasting whiteness for the ultra-high light reflection factor that enhances safety, reduces rejects, cuts unit costs.

There's a Save-Lite White for: moderate-cost maintenance; outstanding resistance to fumes; moisture resistance combined with high-speed drying; resistance to *both* moisture and fumes, also with the fast-dry feature.

Each of these four Save-Lites is a product of Sherwin-Williams Industrial Research—and *that* means tops in its field!

Products of SHERWIN-WILLIAMS INDUSTRIAL RESEARCH

2. COLOR

ENGINEERED FOR INDUSTRY

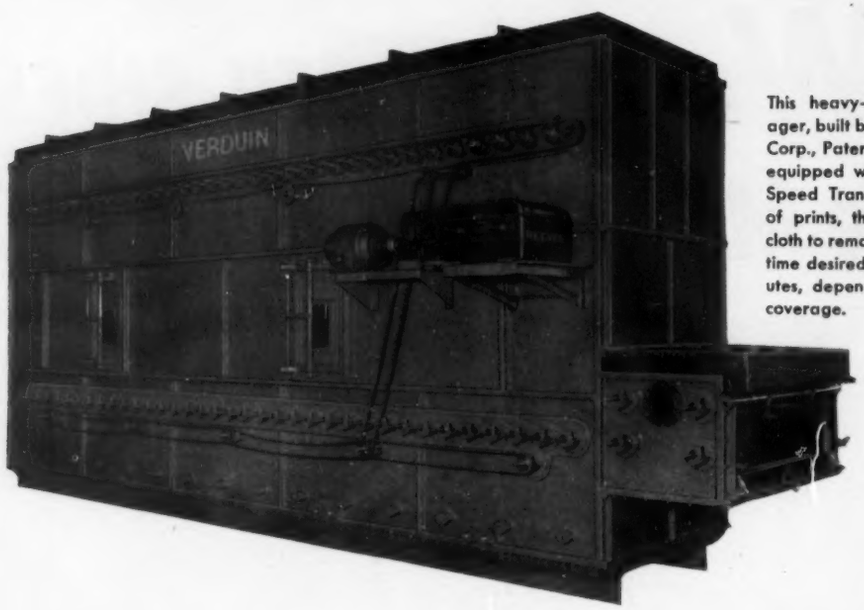
Put Sherwin-Williams Kem Color Harmony to work in your plant—and watch product quality, output, employee morale go *up* . . . rejects, fatigue, eyestrain, accidents, labor turnover go *down!*

Sherwin-Williams color specialists *selected* each color and color combination in the Kem Color Harmony line . . . Sherwin-Williams laboratory experts *formulated* every finish for exceptional durability *at the point of use* . . . *engineered* all the colors into a group of comprehensive color harmonies that bring increased output, improved working conditions, lower costs into *every* industry.

★

Let us tell you how *you* can make the fullest use of Color Harmony. The Sherwin-Williams Co., Industrial Division, Cleveland 1, Ohio. (Export Division, Newark, N. J.)

SHERWIN-WILLIAMS INDUSTRIAL FINISHES



This heavy-duty vat piece-goods ager, built by John Verduin Machine Corp., Paterson, N. J., is standardly equipped with a REEVES Variable Speed Transmission. In developing of prints, the REEVES unit permits cloth to remain in ager any length of time desired, from two to eight minutes, depending on the amount of coverage.

Step up profits with REEVES Stepless Speed Control

Capitalize on the textile industry's proved method of improving quality, increasing production and reducing manufacturing cost. Assure faster, more profitable operation of your driven machines—under every changing condition—with instant, accurate REEVES Speed Control.

REEVES Variable Speed Drives provide infinite speed adjustability to compensate for differences in texture, weight or moisture content of cloth . . . and for variations in temperature, humidity or skill of operators.

Thousands of REEVES installations in textile mills have demonstrated their ability to solve problems in preparation, fabrication, spinning, twisting, finishing, dyeing, etc.

REEVES Speed Control is available in three basic units with a wide range of designs, sizes, capacities and speed ratios . . . with manual, completely automatic or electric remote control.

A REEVES engineer, widely experienced in textile mill applications, will be glad to work with you and recommend the REEVES units which best meet your needs. For complete information on the entire REEVES line, send today for the recently published 114-page catalog T-450A.

REEVES PULLEY COMPANY • COLUMBUS, INDIANA

Recognized Leader in the Specialized Field of Speed Control Engineering

THE THREE BASIC REEVES SPEED CONTROL UNITS

VARIABLE SPEED TRANSMISSION for providing infinite, accurate speed flexibility over a wide range—2:1 to 16:1. Sizes—fractional to 87 hp.

VARI-SPEED MOTOR PULLEY provides an instantly variable speed drive within 4:1 ratio for any constant speed motor. Sizes to 15 hp.

MOTODRIVE combines motor, speed varying mechanism and reduction gears in single compact unit. Speed variations 2:1 to 6:1 inclusive. Sizes to 15 hp.

Accurate Variable
REEVES Speed Control
Gives the Right Speed for Every Job!

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N.Y. FEBRUARY, 1948

AVC Publishing Comprehensive New Handbook "Spinning Rayon Staple on the Cotton System"

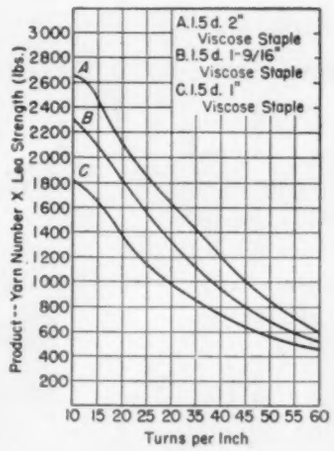
Based on long research and practical experiment in the American Viscose Corporation Textile Research Department, a new technical handbook entitled "Spinning Rayon Staple on the Cotton System" will soon be released by the Corporation.

Written by men intimately associated with the subject, the book has been compiled from information accumulated through years of exhaustive research work. Containing 144 pages, it tells of the development of rayon staple, describes its properties, and details the methods and techniques developed to help manufacturers achieve the best results from its use on the cotton system.

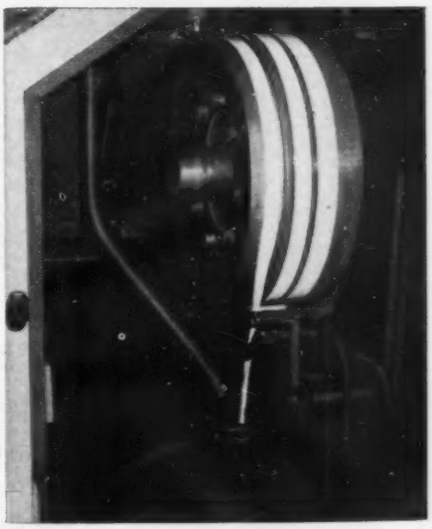
For example, it charts the effects that the various deniers and staple lengths of "Avisco" rayon staple can provide. Proper procedures for blending, tinting, picking, carding, drawing and spinning are analyzed, as are numerous other processing steps such as weaving, dyeing, printing.

Photographs, charts and tables accompanied by descriptive captions furnish a wealth of additional information, while a carefully detailed table of contents makes reference easy.

The book is offered free to technically qualified persons who request it on their business letterheads.



One of the 35 informative graphs from the handbook. It visualizes the effect of twist on the Lea-Skein Product of 20/1 yarns of Avisco viscose rayon staple.



Rayon tow entering a staple cutter, in the process of becoming Avisco rayon staple, as shown in the new handbook "Spinning Rayon Staple on the Cotton System."

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

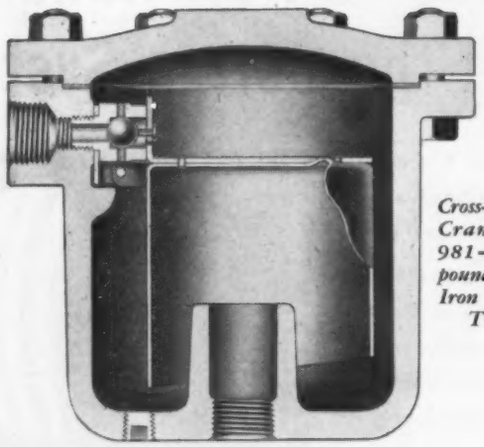
Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

RAYON 20 YEARS AGO

NEW YORK, Feb. 1928—Better processing of other textile fibers is resulting from knowledge gained from new rayon processing machinery, a trade magazine observes.

LEWISTOWN, PA., Feb. 1928 — American Viscose announces it will build a $1,250,000 addition to its plant here this year.

A Steam Trap With Only One Moving Part



Cross-section Crane No. 981—150-pound Cast Iron Steam Trap

Float Actuating the Disc through Simple Lever is Only Moving Part

Extremely simplified and compact design with unusually high discharge capacity. Assures efficient drainage of all steam piping and steam heated equipment. Saves fuel . . . keeps steam hot and dry. Works automatically . . . requires practically no maintenance. Extra strong and wear-resisting construction throughout. Easy to install and service.

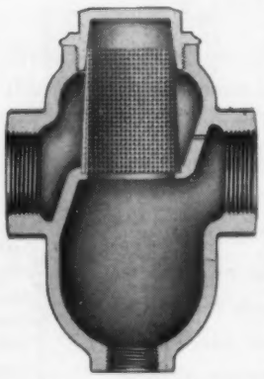
WORKING PRESSURES AND SIZES: 1 to 150 pounds saturated steam, in ½-in. size only—1 to 200 pounds, from ½ to 1-inch incl.—50 to 300 pounds, in ¾ and 1-in. sizes. See your Crane Catalog, or

WRITE FOR DESCRIPTIVE BULLETIN AD-1610

How Much Is Dirt in Pipelines Costing You?

. . . Stop this 2-way waste with CRANE SEDIMENT SEPARATORS

The cutting action of dirt and scale in any pipeline is a menace to valve and trap life. In lines to automatic machines, foreign matter may be the cause of frequent shutdowns, or of high product spoilage.

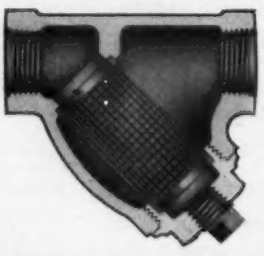


Cross-Section Standard Type

WORK AUTOMATICALLY —EASY TO SERVICE

Crane Sediment Separators automatically trap and remove all dirt from pipelines. Extra large screening areas assure free fluid flow and minimum pressure loss. Only periodic emptying of sediment pocket is required. Crane design permits easy cleaning out and replacement of screen.

Cross-Section Y-Pattern



FOR HIGH OR LOW WORKING PRESSURES

A wide range of sizes in several types in iron and steel, with screwed or flanged ends, assures a Crane separator for most needs. All types supplied with screen of mesh and material best suited for service specified. See your Crane Catalog or

WRITE FOR DESCRIPTIVE BULLETIN AD-1638

CRANE CO., *General Offices,* 836 South Michigan Avenue, Chicago 5, Illinois
Branches and Wholesalers Serving All Industrial Areas

EVERYTHING FROM . . .

VALVES
FITTINGS
PIPE

CRANE

PLUMBING
AND
HEATING

FOR EVERY PIPING SYSTEM

A BUYING GUIDE FOR ABRASIVES

ABRASIVE PROBLEM:
Is there anything NEW on Identifying, Specifying and Packaging Coated Abrasives?

ANSWER BY
CARBORUNDUM
TRADE MARK

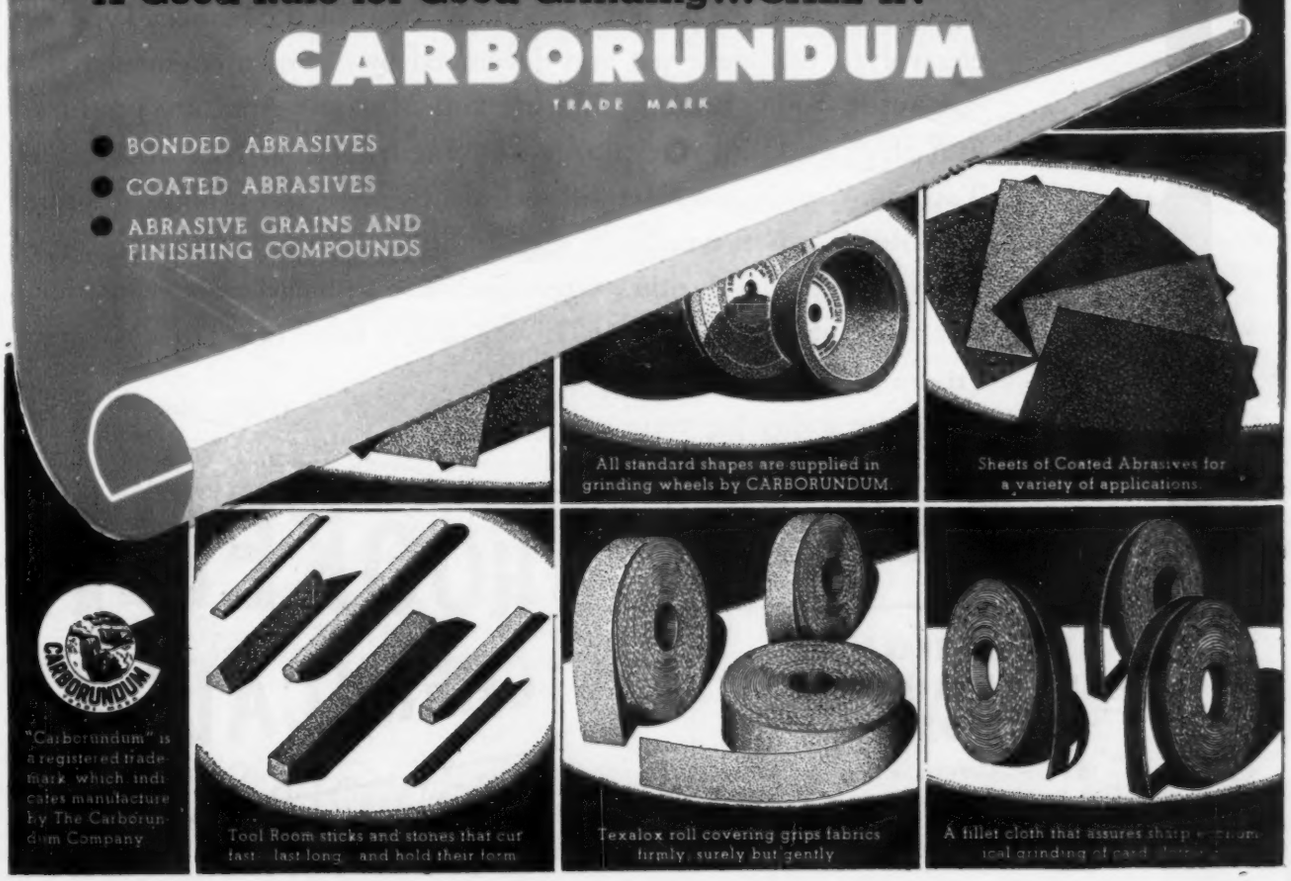
The Carborundum Company has developed an entirely new and more convenient method of packaging coated abrasives. Based on a careful analysis of requirements and problems of both users and distributors, it facilitates use, handling, shipping and stocking of coated abrasives.

Under this new system, sturdy packages contain "decimal" quantities of 25, 50 or 100 sheets. Cartons replace paper wrappings. Standard units are emphasized. Products are clearly identified by their end-use name on labels and backing. Ordering is expedited. Pricing and inventory are simplified. Handling is easier. Cardboard sleeves protect against curling and tearing.

This interest in the problems of our customers is amply repaid in the increasing preference for products by CARBORUNDUM. The Carborundum Company, Niagara Falls, New York.

A Good Rule for Good Grinding...CALL IN
CARBORUNDUM
TRADE MARK

- BONDED ABRASIVES
- COATED ABRASIVES
- ABRASIVE GRAINS AND FINISHING COMPOUNDS



All standard shapes are supplied in grinding wheels by CARBORUNDUM.

Sheets of Coated Abrasives for a variety of applications.

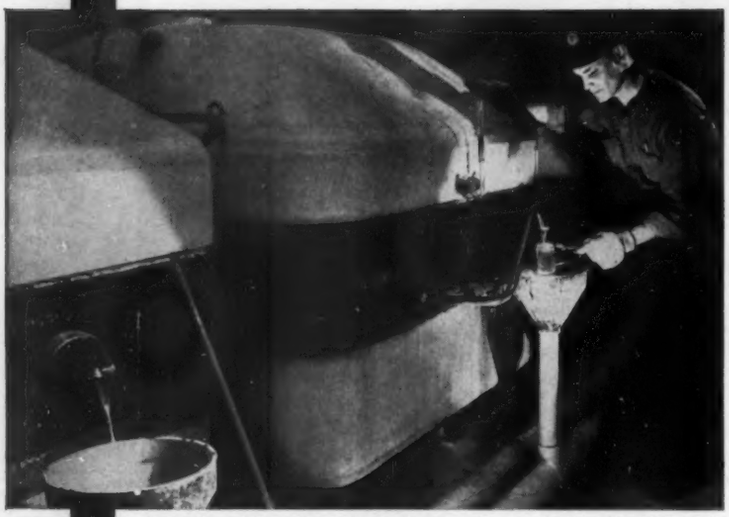
Tool Room sticks and stones that cut fast, last long, and hold their form.

Texalox roll covering grips fabrics firmly, surely but gently.

A fillet cloth that assures sharp [illegible] grinding of card [illegible]

"Carborundum" is a registered trade-mark which indicates manufacture by The Carborundum Company

Three Hooker Chemicals That Help Make Thousands



Samples of Caustic Soda, as it comes from the Hooker "S" Cell, are checked carefully in the laboratory for strength and purity.

✓ **LIQUID CHLORINE**
✓ **CAUSTIC SODA**
✓ **MURIATIC ACID**

Hooker chemicals numbering over a hundred, and thousands of other products get their start from Caustic Soda, Liquid Chlorine and Muriatic Acid made by Hooker. Your supplies of these basic heavy chemicals are made possible to a large extent by the Hooker Type "S" electrolytic cell, designed and developed by our own engineers.

Caustic Soda, Liquid Chlorine and Muriatic Acid are produced and shipped from our plants at Niagara Falls, New York, and Tacoma, Washington. Helpful technical service and prompt shipping are corollary to the uniform high quality of these Hooker products.

Data sheets and other literature describing Hooker Chemicals are available upon request. If you don't have our latest General Products List, Bulletin 100, why not write today for your copy?

HOOKER CHEMICALS

HOOKER ELECTROCHEMICAL COMPANY

14 Forty-Seventh St., Niagara Falls, N. Y.
New York, N. Y. Wilmington, Calif. Tacoma, Wash.

Aluminum Chloride Paradichlorbenzene Monochlorbenzene Sodium Benzoate Sulfur Chlorides Sodium Sulfide Sodium Sulfhydrate

Pails that sail through
CONTAMINATION PROBLEMS
SAFETY FOR SENSITIVE PRODUCTS: Rustproof and corrosion-resistant, these long-lasting Inconel pails assure top protection against metallic contamination. Made and stocked in 12-14-16-20 quart sizes.

Ordinary pails? Not by a long shot!

They're in a class by themselves.

They stay bright and clean. They stay smooth and sturdy. They put an end to metallic contamination of dyes, sizing and bleaches. And they'll be on the job long after ordinary pails have hit the scrap heap.

Why?

Because they're made of solid Inconel*. This Nickel Chromium Alloy is especially suitable for acid dyeing as well as for the application of diazotized and developed colors and sulfur colors. It resists corrosion by dilute hypochlorites, sizing or other compounds and solutions used to impregnate fabrics.

Easy to clean and keep clean, Inconel—like all high Nickel Alloys—can never rust. It's the same all the way through. There's no coating to chip or crack, nothing to wear away. And it has the strength and toughness to take plenty of slamming around.

Durable, all-welded Inconel pails are made by the ALLCRAFT MANUFACTURING COMPANY, INC. Because of their long life, ALLCRAFT Inconel pails are the most economical you can buy; the protection they afford against metallic contamination makes them the safest you can use.

*Reg. U. S. Pat. Off.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

INCO TRADE MARK **INCONEL**

...80 NICKEL — 14 CHROMIUM

FOR FURTHER INFORMATION — MAIL COUPON

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

Please tell me where I can obtain ALLCRAFT *Inconel pails.*

Name.....

Company.....*Title*.....

Address.....

City.....*Zone*.....*State*.....

T I. 2-48

How to Gain and Maintain a
Delicate Balance
When a Loom-Clutch
Operates this easily...
...Here's what it means to you—
THIS SMOOTH
"Brake-Action"
Acts to Prevent
Yarn-Breakage and Binder-Chatter
Look through the Eye of
C&K's High-Speed Camera
...and see a Bobbin Transferred in 1/20th of a Second!
Crompton & Knowles Loom Works

MANY STUDIES . . .

One Objective . . .

to give you Finer Fabric at Lower Cost, from every New C&K Loom

▶How to increase shuttle-speeds, yet at the same time handle shuttle-velocity which *now* attains 40 mph from a dead stop in 1/30th of a second?

▶On the other hand, how to bring this speeding shuttle to a smooth stop so as to prevent yarn-breakage and binder-chatter?

▶How to select and substitute a full bobbin for an empty one, and complete the transfer in 1/20th of a second?

▶How to gain and maintain a delicate balance in "sideslip" feelers (which should be always positive-acting, yet never sever the yarn)?

▶How to provide "fingertip" clutch-operation, yet reduce adjustments, bang-offs, parts-breakage?

These studies and more have been detailed on these pages during recent months. But these are just a few of the projects in progress in C&K's Engineering Research Laboratories, each project aimed at the end-result of *increasing your own weaveroom efficiency and profit*. And to make sure of its value to you, every new idea produced by these studies . . . in method, material, or design . . . must answer yes to the challenge of *at least one* of C&K's "6 Sentries":

1. Does it increase Speed of Loom Operation?
2. Does it increase Ease of Loom Operation?
3. Does it improve Quality of Fabric?
4. Does it decrease Cost of Maintenance?
5. Does it improve Continuity of Operation?
6. Does it improve Appearance and Utility?

And there, we submit, is the *soundest future profit-protection* you can have!

Crompton & Knowles Loom Works

WORCESTER 1, MASSACHUSETTS, U. S. A.
PHILADELPHIA, PA. • CHARLOTTE, N.C. • ALLENTOWN, PA.

CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

between Today's Knowledge . . . and Tomorrow's Looms

ATTENTION PLEASE!

The International Exposition of Textile Machinery, Equipment, and Supplies . . . to be held in the 71st Regiment Armory, 34 St. and Park Ave., N. Y., May 3-7, 1948 . . . will be attended by mill owners, overseers, superintendents, and purchasing agents representing all fibers and from every textile producing center in America and from all parts of the world. If you're making a product of interest to this audience, show it at this trade exposition.

If you're interested in attending, write for as many invitations as you desire.

For full information regarding this exposition, write: Executive Offices, Suite 205, 36 West 47th Street, New York 19, N. Y., or Phone WAtkins 9-8068-9-70.

The trend is toward Lanese*

a key fiber in quality men's wear fabrics

When it comes to men's apparel . . . suits, sports jackets, shirts, slacks, robes, shorts, bathing trunks . . . there is an ever increasing demand for fabrics that are made with Celanese Lanese synthetic staple fiber.

Small wonder, for fabrics containing a dominant proportion of Lanese contribute definite advantages to the appearance of men's clothing . . . they are resistant to wrinkling, hold a crease well, keep their shape, possess a high degree of dimensional stability.

Lanese adds to the versatility of the men's clothing industry by making available a wide variety of weaves and textures suitable for every season of the year . . . by providing an interesting range of color effects through cross dyeing. Furthermore, the low moisture absorption of Lanese discourages the penetration of soil and stain . . . cleaning is never a problem.

It is especially significant that the unique advantages provided by Lanese are available without the need for extensive finishing operations.

Celanese Lanese*

SYNTHETIC STAPLE FIBER

CELANESE CORPORATION OF AMERICA, 180 MADISON AVENUE, NEW YORK 16, N. Y.

Branch Offices PHILADELPHIA 7, 12 South 12th Street • CHARLOTTE 2, 1106 Liberty Life Building • BOSTON 10, 140 Federal Street

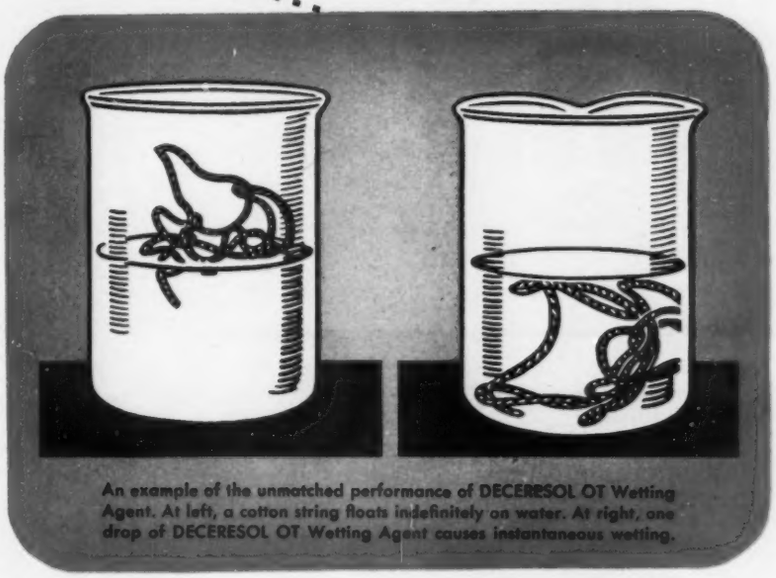
*Reg. U. S. Pat. Off.

FOR IMMEDIATE SINKING IN WATER...

IN IMMEDIATE SUPPLY...

AND IMMEDIATE DROPPING IN COSTS...

STANDARDIZE AT THE QUALITY LEVEL WITH



An example of the unmatched performance of DECERESOL OT Wetting Agent. At left, a cotton string floats indefinitely on water. At right, one drop of DECERESOL OT Wetting Agent causes instantaneous wetting.

...DECERESOL OT Wetting Agents

You get speedier application in the wetting of textiles – better penetration, dispersing and dye levelling properties – when you standardize on Cyanamid's DECERESOL* OT Wetting Agents, now again available in larger quantities.

But that is only *one* side of the story. DECERESOL OT Wetting Agents are also very economical to use. A little of it goes a long way. Its efficiency lowers costs, saves time.

And don't forget this *third* important advantage: the continual use of DECERESOL OT Wetting Agents results in *higher quality production*, as well.

If you are not now using DECERESOL OT Wetting Agents, it will pay you to write for further information about these superior wetting agents. Or, if you wish, one of our representatives will be glad to call and demonstrate DECERESOL OT Wetting Agents to you personally.

AMONG CYANAMID PRODUCTS FOR THE TEXTILE INDUSTRY ARE . . . AQUASOL* Sulfonated Castor Oils; NO-ODOROL* Finishing Oils; DECERESOL* OT Wetting Agents; PARAMUL** 115 Water Repellent; Penetrants, Softeners, Finishes, Sizing Compounds, and other specialties and Heavy Chemicals. For low-cost chemical equivalent of distilled H_2O . . . FILT-R-STIL* Demineralizing Units.

SALES OFFICES: Boston, Mass.; Philadelphia, Pa.; Pittsburgh, Pa.; Baltimore, Md.; Charlotte, N. C.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; Detroit, Mich.; Kalamazoo, Mich.; St. Louis, Mo.; Los Angeles, Calif.; San Francisco, Calif.; Seattle, Wash. In Canada: Dillons Chemical Co., Ltd., Montreal and Toronto.

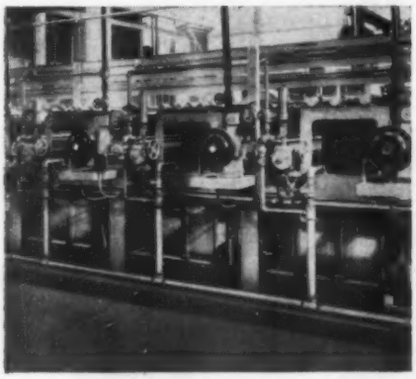
*Reg. U. S. Pat. Off. **Trademark

American Cyanamid Company

Industrial Chemicals Division

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

HOW THESE OPERATIONS CAN SOLVE THESE PROBLEMS FOR YOU



SOAPING VAT COLORS

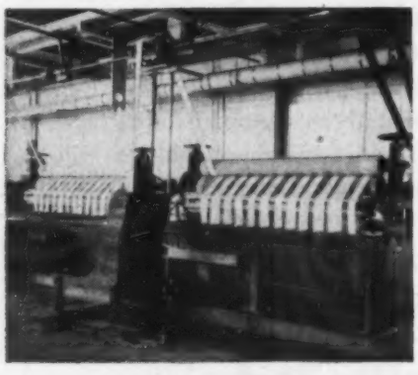
1. **Removing excess and lightly attached dye-stuff.**
2. **Getting clear, bright colors that will not rub off.**

Mere soaping alone isn't the answer to these two problems. It takes a *good soaping* with Armour's FLINT CHIPS to remove excess dye-stuff, clear the whites, brighten the colors. Since maximum soaping results are attained at about 180°-190° F., high titer FLINT is ideal. Besides, you get a thorough boil with FLINT, because it stays active even under steam. Results—sparkling, clean cottons!

FULLING, SCOURING REWORKED WOOL

1. **Fulling and cleaning the wool in a minimum amount of time.**
2. **Obtaining a clean, clear-looking piece of fulled cloth.**

For really successful fulling and scouring it takes Armour's TEXSCOUR Soap. TEXSCOUR, a red oil base soap in flake form, affords superior wetting and penetrating properties. At the same time, it has enough *body* for the fulling job. Good scouring must be done at low temperatures to keep the wool from felting and shrinking. That's why 8-12° titer TEXSCOUR cleans up fibres, leaves wool soft and resilient.



DESIZING COTTON

1. **Freeing cotton goods from sizing, prior to dyeing.**
2. **Avoiding spotty dyeing and uneven shades to secure a uniform finish.**

In desizing cotton, you need high wetting and penetrating properties rather than high detergency—a synthetic rather than a soap. The best solution to your problems is Armour's REGAL Synthetic Detergent. REGAL is a modern all-purpose synthetic that is readily soluble in cold or hot, soft or hard water. It rinses quickly and freely without insoluble deposit. Because of its swift penetration rate, REGAL reduces the time required for desizing operations, yet finished goods are free from sizing and permit level, uniform dyeing.

Remember, There are Armour Soaps and Synthetic Detergents to Solve All Your Textile Problems

ARMOUR and Company

Industrial Soap Division

1355 WEST 31ST STREET • CHICAGO 9, ILLINOIS

Why settle for less than Super-Clean Air?

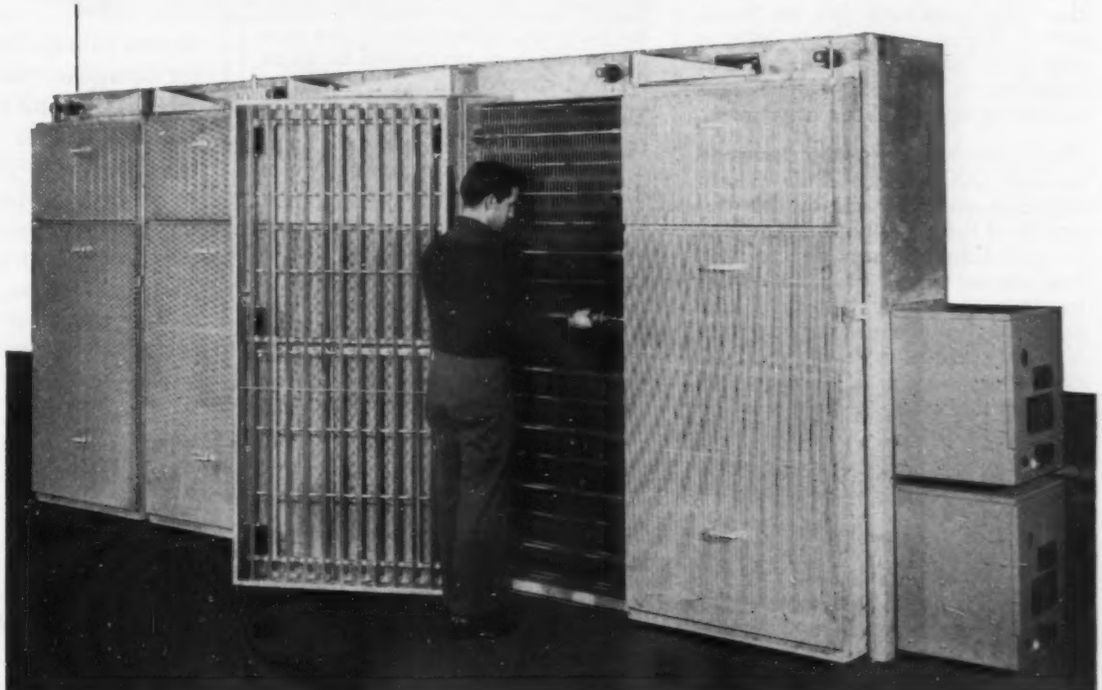
Electro-Cell Electronic Precipitator Offers Highest Efficiency—Requires Minimum Maintenance

IF dust, soot and smoke are a threat to the quality of your products, anything short of super-clean air will cost you money in the form of rejects and seconds. That's why mills who refuse to leave anything to chance choose the AAF Electro-Cell filter.

This modern electronic precipitator not only removes dust and soot from the air but also smoke and dust particles of fractional micron sizes. Where continuous operation is desired, filter can be supplied which provides for automatic cleaning of the collector plates without interruption of service. However, these collector plates are so designed that they may be removed for servicing in a special cleaning tank or washed and re-oiled in place by manual methods. Other features such as sectional construction and full height hinged ionizers make for simplified installation and greater safety.

Information on the Electro-Cell Electronic Precipitator is contained in Bulletin No. 252. It's free for the asking as are the services of AAF application engineers to aid you with your air filtering problems. Just call your local AAF representative or write direct to—

American Air Filter Company, Inc.
275 Central Avenue, Louisville 8, Ky.
In Canada: Darling Bros. Ltd., Montreal, P. Q.



AAF
AIR FILTERS
AND DUST CONTROL EQUIPMENT

TEXTILE MACHINERY and

PUBLISHED BI-MONTHLY FOR TEXTILE MILL EXECUTIVES AND OPERATING PERSONNEL BY PROCTOR & SCHWARTZ, INC.

• F E B R U A R Y • 1 9 4 8 •

Truck Dryer Proves Adaptable for Rayon Cakes and Skeins

Many small throwing mills handling rayon yarn in both cake and skein form have such moderate output requirements that it is not feasible to install an automatic skein yarn dryer for drying skeins and separate semi-automatic tunnel truck dryers for drying cakes.

Recognizing the need for a single equipment installation to meet the needs of these mills, Proctor & Schwartz engineers have found that the standard Proctor truck yarn dryer, with few minor changes, can be installed for handling either cakes or skeins which have been sized and tinted.

These machines may be designed in 500, 1000, and 2000 pound nominal capacity sizes. The capacity of the 1000 pound machine is as follows: When drying 48" reel rayon skeins only, following treatment and centrifuging, this machine will handle a capacity of 1000 pounds dry weight rayon skeins per day of 10 hours. This is based, of course, on operation following Proctor specifications.

When drying treated and centrifuged 1 to 1¼ pound pot spun rayon cakes only, the same machine will deliver a capacity of approximately 900 pounds dry weight per day of 24 hours continuous operation. The average drying time for skeins is 2 to 3 hours; for cakes 34 to 35 hours.

Cakes and skeins may be dried interchangeably—or in the same machine when it is designed with space for two or more trucks—for there is a difference in the way the trucks must be loaded for each type of drying.

The first of these machines have been installed and already have a proven record for uniformity of drying, high efficiency, low steam consumption, and low power requirements.

Complete information on the application of these machines to your mill will be sent in answer to your request—which should supply us as much information as possible about your problem, to enable us to answer you most intelligently.

COMPREHENSIVE BOOKLET ON TEXTILE FINISHING EQUIPMENT

A new 16-page booklet "Proctor Equipment for the TEXTILE FINISHER" has recently been published. This booklet contains complete descriptions of seven Proctor dryers and drying systems especially designed for the textile finishing plant. The booklet is interestingly written and informative. Write for your copy today.

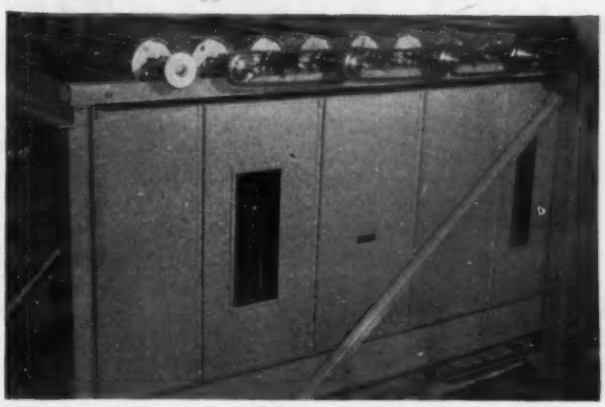
Strong Trend to Metallic Cards

With orders for more than 60 complete new Proctor Metallic Worsted Cards on hand and new orders arriving daily, all indications point to a strong trend throughout the industry to this modern type of carding equipment.

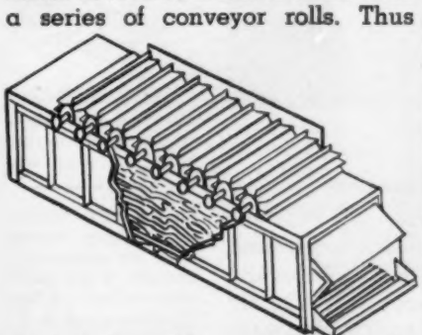
The production record established by these cards—as reported by independent survey figures—proves the value of these cards in the mill. One mill reported output increases of 185% per card. In addition the quality of carded wool was noticeably improved. Write for details on these modern cards.

DRYING EQUIPMENT *News*

New "Sandwich" Blending Unit Eliminates Inaccuracy of Hand Labor



An entirely new and completely automatic blending unit, developed recently by Proctor engineers, carries automatic blending to the ultimate, completely eliminating the inaccuracy of hand labor. The unit is designed to be used with automatic weighing feeders, which feed various stocks in predetermined amounts to a super picker followed by a ceiling condenser, which in turn deposits the stock on a series of revolving rolls that form the top of the blending unit. When stock reaches the far end of the series of rolls, a timing mechanism reverses every other roll momentarily, creating a series of feed rolls out of what were a series of conveyor rolls. Thus

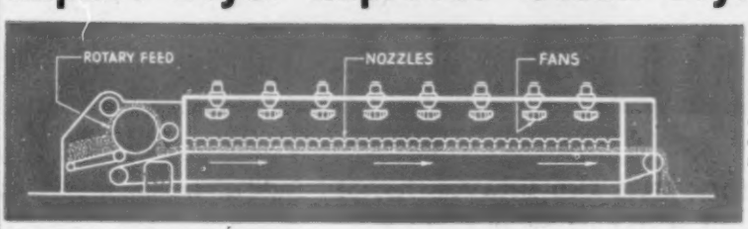


stock is deposited on a temporarily stationary apron on the bottom of the bin. This action is repeated and a sandwich blend is built up. When the bin is full, the apron moves forward toward breakdown rolls with retracting pins which draw out and compress the mass of stock and feed it evenly to a picker for further processing. Not only does better blending result—but actual labor involved is reduced to a new low. The system first developed for wool blends has been found adaptable to use with cottons and synthetics. Write for complete information.

REPRINTS OF CURING ARTICLE AVAILABLE

Reprints of an article on the general subject of "Curing Resin Treated Fabrics" which was written by Geo. W. O'Keeffe, Vice President of Proctor & Schwartz, expressly for the American Wool and Cotton Reporter, are available on request. Mr. O'Keeffe, who has been in close contact with curing developments during the past several years has made this an interesting digest of developments.

"Breathing Action" Design of Impact Dryer Improves Stock Drying



Write for complete details on this system.

Patented features of design of the Proctor impact dryer make possible what has been graphically described as "breathing action". This action is illustrated by the side elevation drawing above. Heated air, at high velocity, is intermittently impinged against the bed of stock, as it is carried through the dryer on a woven wire or perforated metal plate conveyor. As the material is subject to this impingement of air, it compresses and as it passes between one jet of air and the next, it expands in a "breathing" like

action. This permits air to circulate all the way through the bed of material and promotes uniform, rapid, and thorough drying. Installations are proving that this is the ideal system for drying fibrous material.

90% OF ALL V-BELT DRIVE PROBLEMS SOLVED ECONOMICALLY WITH TEXROPE

Pre-Engineered Drives

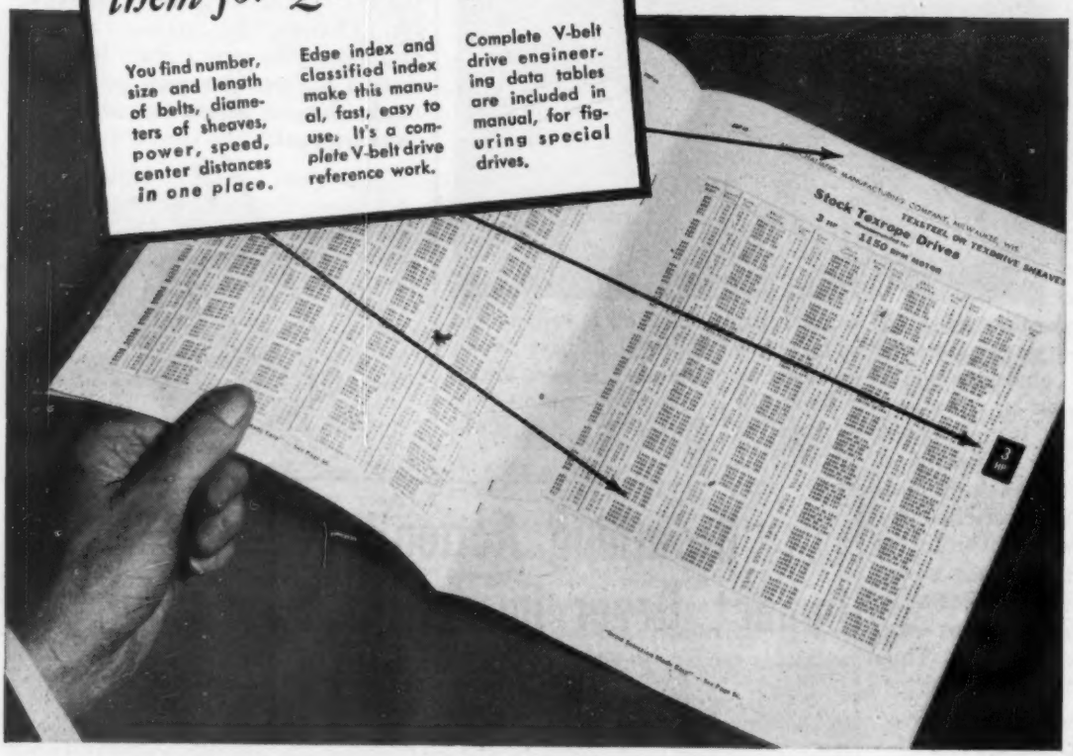
TEXROPE .. Greatest Name in V-Belt Drives

This New Manual Lists them for Quick Reference

You find number, size and length of belts, diameters of sheaves, power, speed, center distances in one place.

Edge index and classified index make this manual, fast, easy to use. It's a complete V-belt drive reference work.

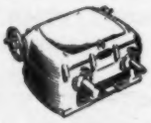
Complete V-belt drive engineering data tables are included in manual, for figuring special drives.



"Super 7" V-BELTS
Five Types — Sizes to suit every power transmission job.

Texsteel, Texdrive, "Magic-Grip"
— sheaves in a full range of sizes, grooves.

"Vari-Pitch" SHEAVES
Exact variations in speed, stationery or motion control.



SPEED CHANGERS
Speed variations up to 375% at the turn of a crank.

ENGINEERING
Finest V-Belt engineering talent in the world—at your call.

TEXROPE "Super 7" V-Belts result from the cooperative research of two great companies — Allis-Chalmers and B. F. Goodrich. They are sold only by A-C.

USING STOCK BELTS AND SHEAVES, Texrope engineers have selected the *best* drive for each requirement . . . the drive most economical in first cost and in maintenance.

Only Allis-Chalmers offers you this complete Pre-Engineered drive manual. It is the product of 23 years of industrial V-belt drive experience, the finest engineering talent in the business.

Here is a book that will save you time and money in the purchase of V-belt drive equipment. Copies have been sent to many Texrope users and dealers. If you don't have a copy yet, write for Texbook No. 20P40. ALLIS-CHALMERS, MILWAUKEE 1, WIS. A 2335

Texrope, Super-7, Texsteel, Texdrive, Magic-Grip and Vari-Pitch are Allis-Chalmers Trademarks

ALLIS-CHALMERS

One of the Big 3 in Electric Power Equipment — Biggest of All in Range of Industrial Products

1847 1947 A CENTURY OF SERVICE to Industry THAT MADE America Great

"Plenty" by Eugene Karlin

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CONTAINER CORPORATION OF AMERICA

MODERN TEXTILE PACKAGING

acids

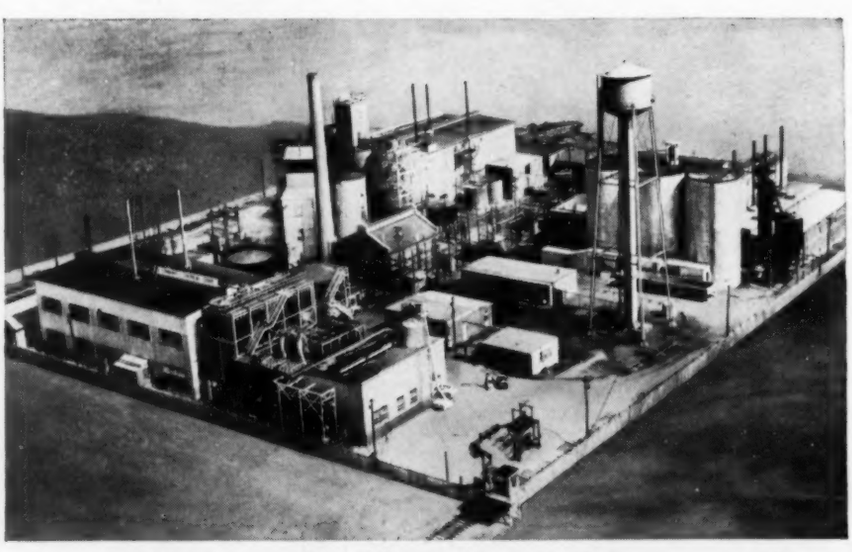
SULPHURIC 66° Bé

MURIATIC 18° 20° Bé

crystal and diamond quality • tankcars, tankwagons, carboys

NITRIC 36° 38° 40° 42° Bé

all strengths — tankwagons, carboys

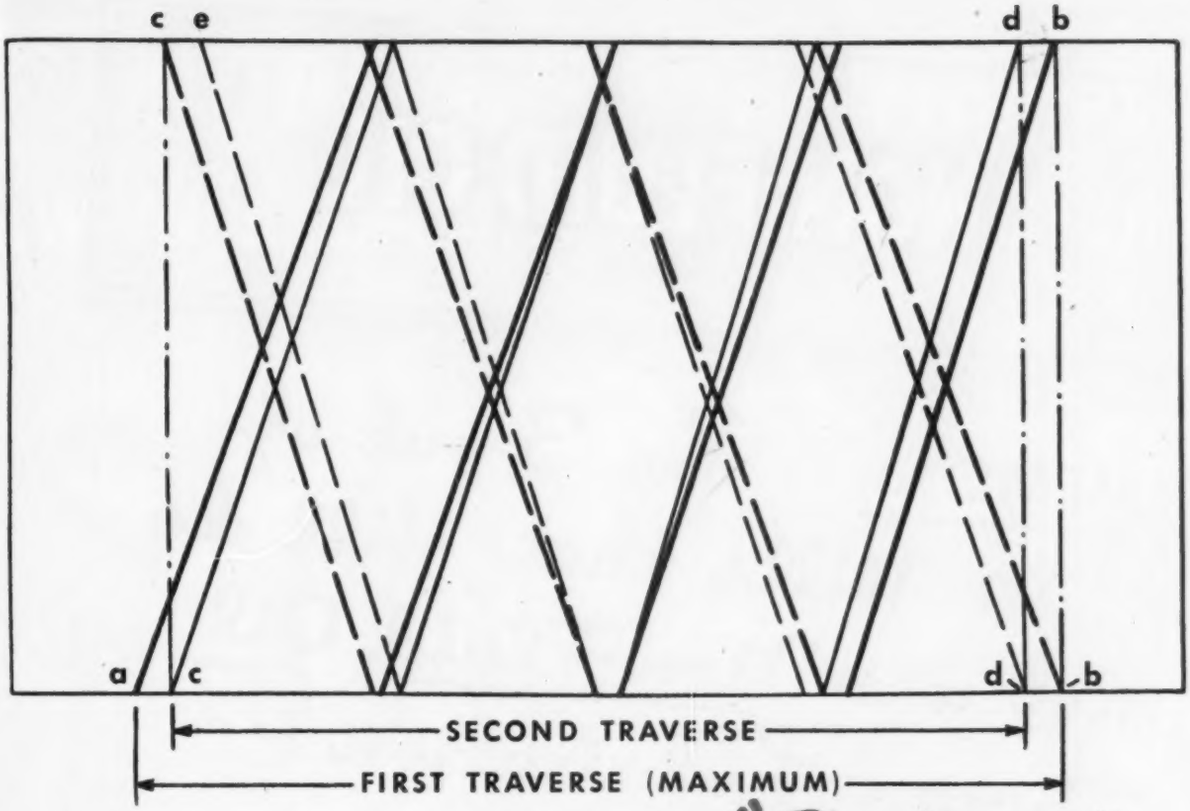


Plant and Laboratories of the Cornwell Chemical Corporation on the Delaware River, Philadelphia (Cornwells Heights). Key location is hub of Cornwell's water-route and rail distribution system.

Cornwell Chemical Corporation

CORNWELLS HEIGHTS (PHILADELPHIA), PA.

Telephone: Torresdale (Phila.) 4-7358 Cornwells 0302 Cables: SEECHEM



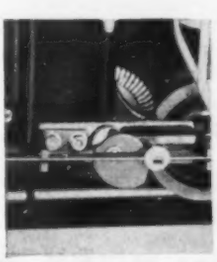
An air conditioning "System" that speeds up lagging

This is how nylon yarn is laid onto the sizing tube by the *patented* traversing mechanism on the No. 250 Universal Sizing Machine.

Each time the yarn is traversed, it is laid on the tube at a slightly different angle. In contrast to a tube on which coils are laid adjacent to each other, this construction allows more air space *inside* the package.

Result: dry air circulates more easily through the yarn mass, permitting faster evaporation of moisture. In the sizing area, Universal tubes dry 1 to 5 hours faster because the tube itself is "air conditioned"—the inside layers dry nearly as fast as the outside layers.

The patented heart-shaped cam connected to



the thread guide causes the yarn to be distributed evenly in alternately long and short layers, hence at varying angles to the tube. In addition to providing a yarn structure more susceptible to drying, it creates a package shape (tapered ends) which eliminates underwinds. Tubes wound on the No. 250 are used as supply on the No. 50 Coning Machine without intermediate re-draw.

UNIVERSAL WINDING COMPANY

Providence, Boston, Philadelphia, Utica, Charlotte, Los Angeles, Atlanta, Chicago, Montreal, Hamilton

UNIVERSAL SYSTEM OF NYLON SIZING AND CONING

Used by More Throwsters Than Any Other Method

NON-FLUID OIL

TRADE MARK REGISTERED

MEMO to: The 3 out of 10 mills that still do not use Non-Fluid Oil Loom Lubrication!

NON-FLUID OIL has been adopted as the standard loom lubricant by the majority of mills because its use helps them secure greatest output of perfect goods.

NON-FLUID OIL prevents "oil spot" loss from dripping, leaking oil that gets on warps and woven goods . . . and from "cam spatters". By providing dependable lubrication until completely used up, NON-FLUID OIL keeps looms in steady operation . . . increasing production and reducing maintenance time by out-lasting oil 3 to 5 times. But remember, the woods are full of all sorts of imitations of NON-FLUID OIL. Write for Bulletin T20TI and free, testing sample of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT CO.

292 MADISON AVENUE, NEW YORK 17, N. Y.

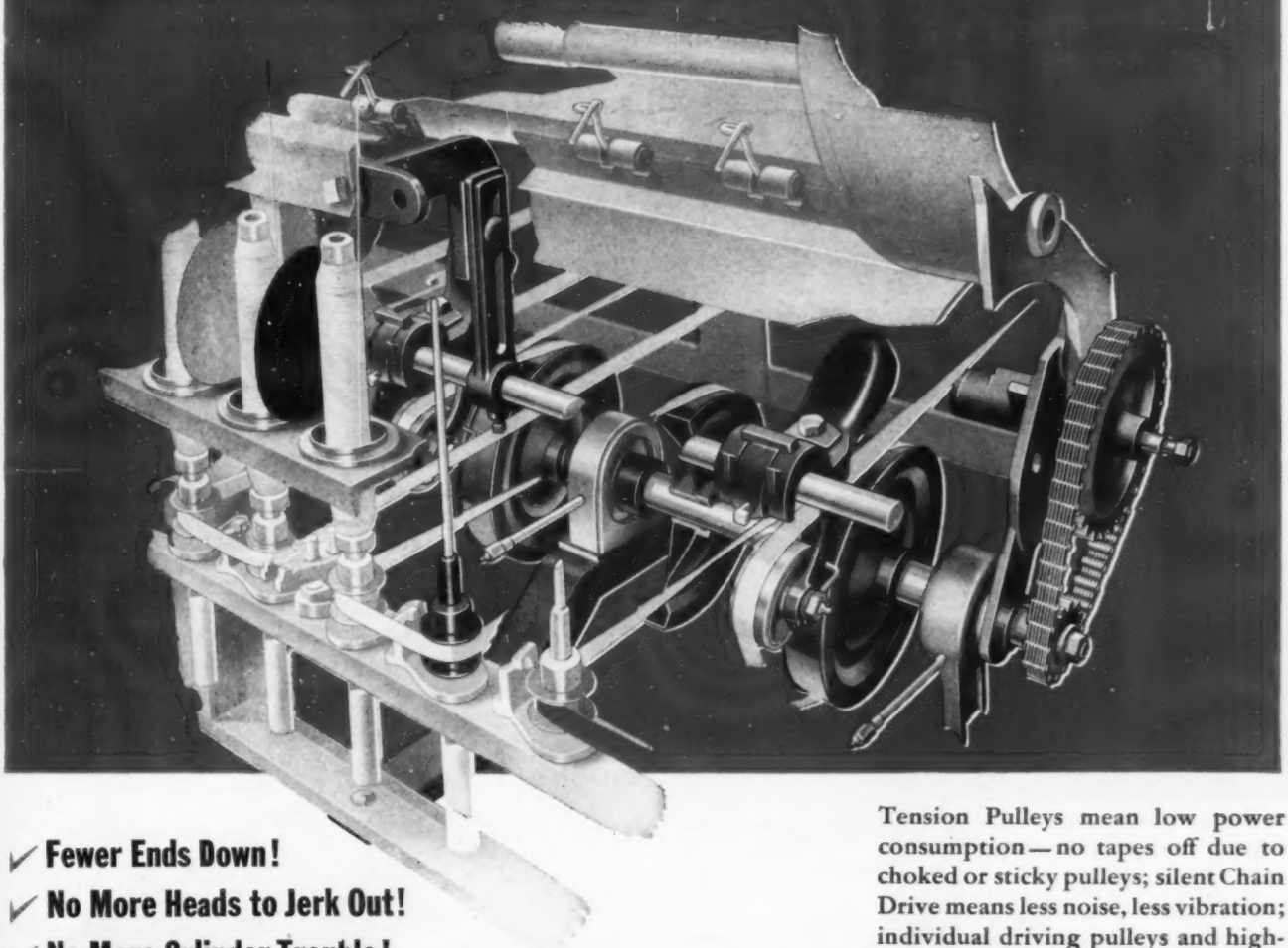
Southern District Manager: FALLS L. THOMASON, Charlotte, N. C.

WAREHOUSES: Charlotte, N. C. — Greenville, S. C. — Atlanta, Ga. — Providence, R. I. — Detroit, Mich. — Chicago, Ill. — St. Louis, Mo.

WORKS: Newark, N. J.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

MODERNIZE Old Frames with MEADOWS Conversions!



- ✓ Fewer Ends Down!
- ✓ No More Heads to Jerk Out!
- ✓ No More Cylinder Trouble!
- ✓ Less Vibration!
- ✓ Uniform Speed and Twist!
- ✓ Better Package-More Yarn!
- ✓ Smoother Operation!

• LET one of our representatives show you how a Meadows Conversion will increase production on your old model band-drive frames, and eliminate cylinder trouble for keeps. Works equally well on frames that are already tape-driven.

Light-weight, solid aluminum alloy Separators mean less wear on yarn while being spun; Ball Bearing Tape Tension Pulleys mean low power consumption — no tapes off due to choked or sticky pulleys; silent Chain Drive means less noise, less vibration; individual driving pulleys and high-strength, ground and polished shafting, mounted on heavy duty ball-bearings, mean low power consumption, smooth operation, and no more cylinder trouble.

We engineer and service each installation, design and manufacture all parts. We will be glad to have a representative survey and estimate your frames without obligation, in their respective territories.

Representatives

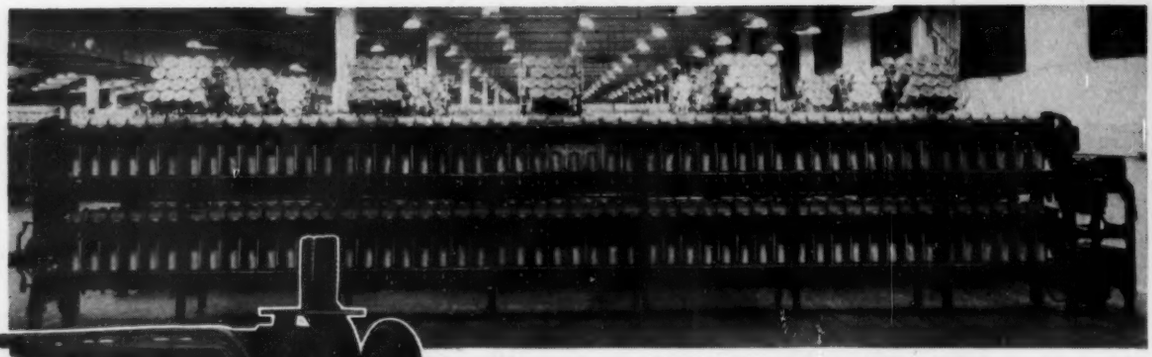
JAMES R. COLEMAN, P. O. Box 1351, Greenville, S. C.

WALTER S. COLEMAN, P. O. Box 722, Salisbury, N. C.

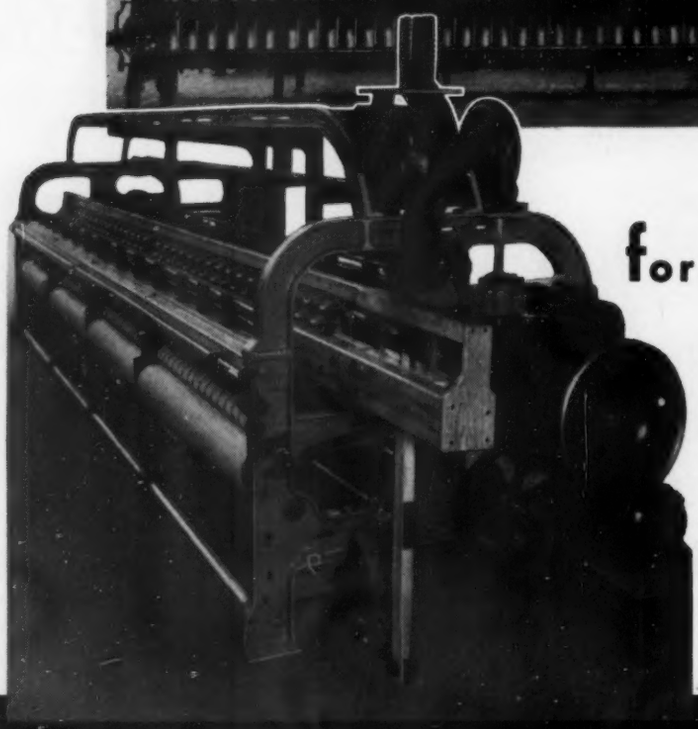
MATTHEWS EQUIPMENT CO., 93-A Broadway, Providence, R. I.

R. L. HOLLOWAY, Atlanta, Ga.

MEADOWS MANUFACTURING COMPANY • Atlanta, Ga.



Fletcher Heavy Duty Double Deck Twister



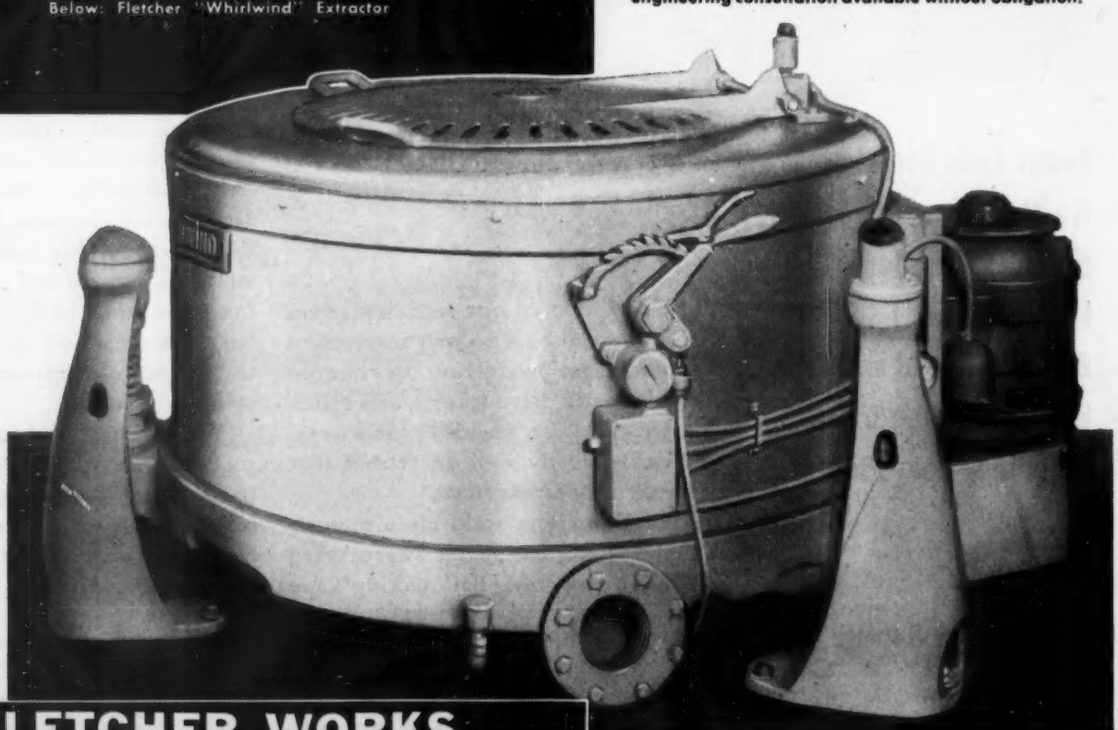
for TEXTILE MACHINERY IT'S *Fletcher*

Above: Fletcher High Speed Webbing and Tape Loom

Below: Fletcher "Whirlwind" Extractor

Leading textile mills, the world over, are equipped with Narrow Fabric Looms, Throwing Machinery for Silk and Rayon, and Textile Extractors designed and built by Fletcher.

Remember — for Textile Machinery — it pays to investigate Fletcher, leaders in serving the Textile Industry since 1850. Write for detailed information . . . engineering consultation available without obligation.

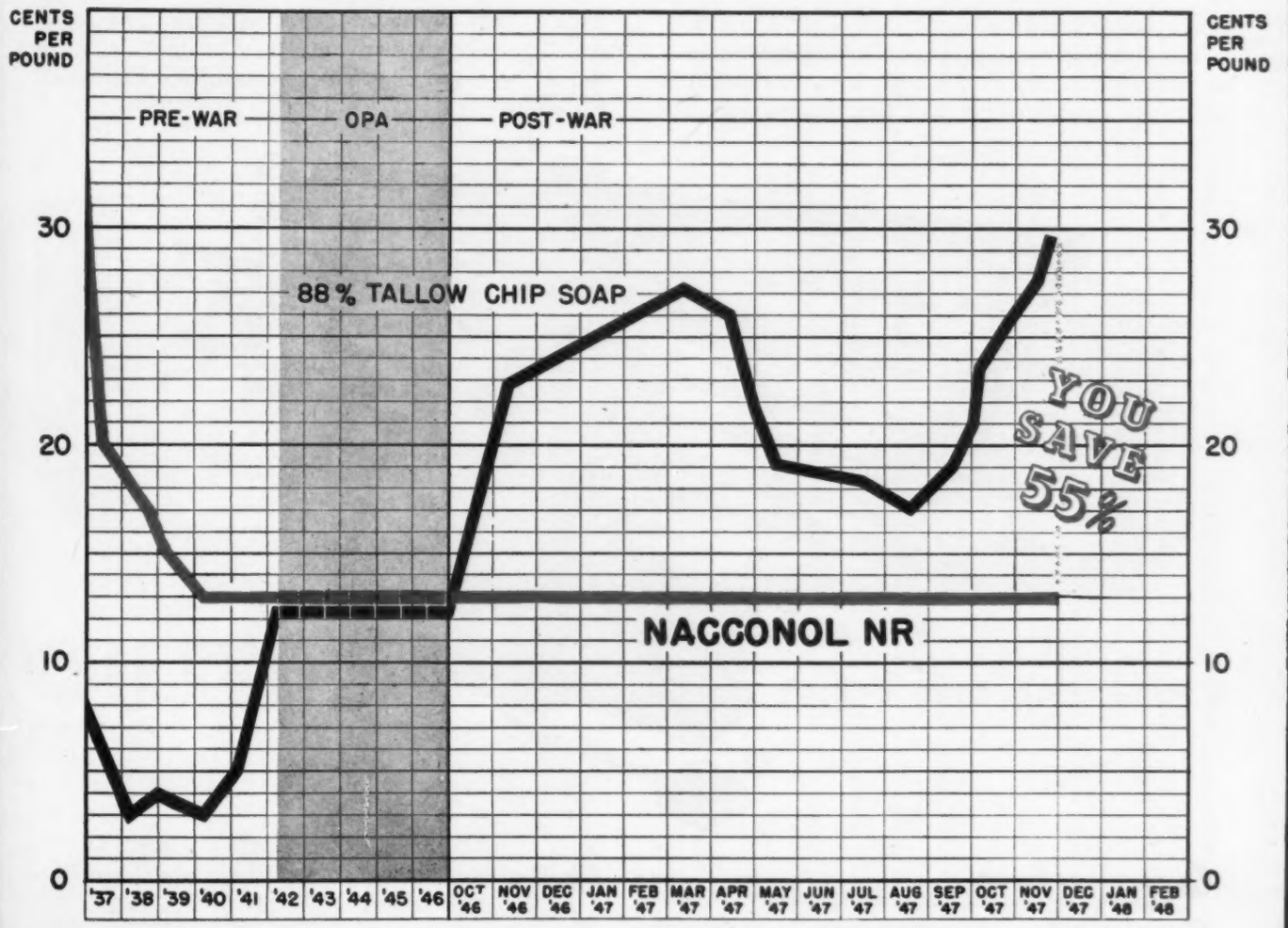


FLETCHER WORKS

226 Glenwood Ave. Estab. 1850 Philadelphia 40, Pa.

Pictures Speak Louder Than Words

COST COMPARISON - NACCONOL NR vs SOAP


CENTS PER POUND
CENTS PER POUND
PRE-WAR
OPA
POST-WAR
30
20
10
0
88% TALLOW CHIP SOAP
NACCONOL NR
YOU SAVE 55%
'37 '38 '39 '40 '41 '42 '43 '44 '45 '46 OCT '46 NOV '46 DEC '46 JAN '47 FEB '47 MAR '47 APR '47 MAY '47 JUN '47 JUL '47 AUG '47 SEP '47 OCT '47 NOV '47 DEC '47 JAN '48 FEB '48

Adopt **NACCONOL NR**
and cut your soap costs

National Aniline DIVISION • ALLIED CHEMICAL & DYE CORPORATION

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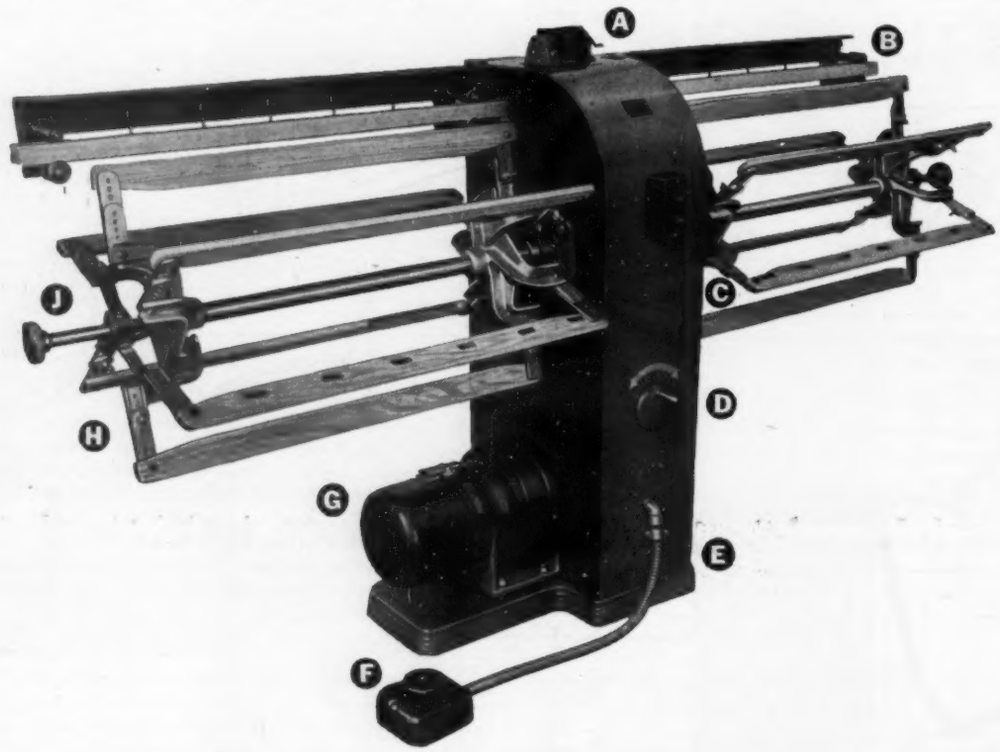
DOWN goes down time . . . UP goes profit . . .

with the NEW FIDELITY SKEIN REELERS

The Fidelity Skein Reeling Machine introduces both a basically new design and a new method of skein reeling. Machines are available either *double end,* as illustrated, with twelve spindles, or *single end* with either six or nine spindles.

One operator can keep a unit of 2, 3, or 4 machines in constant operation doffing and starting new ends on each machine before the next stops. Production is continuous, and workers like the streamlined ease of operation. Greater efficiency with less fatigue. Foremen are enthusiastic about its quick adaptability to production changes—handling dye lots of any size and variety—rayon—nylon—silk—cotton—worsted yarn.

Our detailed folder includes a long list of users who have already approved these machines. Your copy will be mailed promptly. Just tear off the bottom of this ad, sign and clip it to your company letterhead. No obligation.



A **VEEDER-ROOT COUNTER.** Absolutely safe for operator. Automatically controls the amount of skein reeled—operator pre-sets yardage.

B **TRAVERSE BAR** supported by flanged rollers on needle bearings gives smooth motion that lays even yarn.

C **PUSH BUTTON START AND STOP SWITCH** within easy reach of operator.

D **VARIABLE SPEED CONTROL** quickly changes reel speed by simple turn of dial handle at front of machine. Speed from 190 RPM to 380 RPM. Up to 450 RPM on 44" skeins.

E **ENCLOSED DRIVE.** Keeps machine dust-free — safe for operator. **BASE FIRM AND RIGID. COMPACTLY DESIGNED** to save floor space. 93" wide x 23" deep x 47½" high.

F **CONVENIENT PEDAL BRAKE RELEASE** for hand-turning reel to starting position.

G **AUTOMATIC MOTOR BRAKE** saves valuable time in the doffing cycle—brings reel to a definite quick stop at the exact skein length pre-set on the Veeder-Root Counter (A)

FRACTIONAL HORSEPOWER MOTOR

H **SPOKES ADJUSTABLE** to reel skeins of 36" to 60" in 1" intervals. **BALANCED REELS FREE FROM VIBRATION.**

J **FREE END AND COLLAPSIBLE SPOKES** for quick easy skein doffing.

FIDELITY MACHINE COMPANY, INC.
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☐ Please send detailed folder ☐ Please have representative call

Mark for the attention of Mr. _____ Title _____
(Please Print)

OILITE

FOR THE TEXTILE INDUSTRY

OILITE *Heavy-Duty — Oil Cushion — Self-Lubricating*
BEARINGS — Machine PARTS and BAR STOCK

Give YOU

- ✓ No OIL SPOTS
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- ✓ Uniformity of PRODUCT
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EXPERIENCED STAFF OF FACTORY and FIELD ENGINEERS AT YOUR SERVICE
STOCKS carried at FACTORY and Field DEPOTS

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CHRYSLER CORPORATION — DETROIT, MICHIGAN

Specially designed for running synthetic and natural fibers, the new red Dayco Type "SE" Roll Covering processes synthetics with greater uniformity, with less lapping up and practically no ends down. Not affected by heat or humidity, The Dayco Type "SE" Roll Covering will give the same uniform service throughout its extremely long life. Remember, whether you're running cotton, wool or synthetics there's a mill-proved Dayco especially engineered for your frames. For complete information write Dayton Rubber, Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Bldg., Greenville, South Carolina.*

DAYCO ROLL COVERINGS
are available for drawing all types of fibers

Whether your frames are equipped with flat or revolving clearers, there is a specially engineered Dayco for maximum results.

TYPE "C" for revolving clearers. Precise, accurate accounting records show the cost per hour of operation is less—with Daycos.

TYPE "S" especially designed for flat clearers, where eyebrowing is a problem. Spinning room overseers, everywhere, acclaim Daycos' ability to draft uniform yarn.

Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

Obermaier Reg. U. S. Patent Office

Stienen Trade Mark

A NEW AND MORE EFFICIENT WOOL RAW STOCK DYEING MACHINE

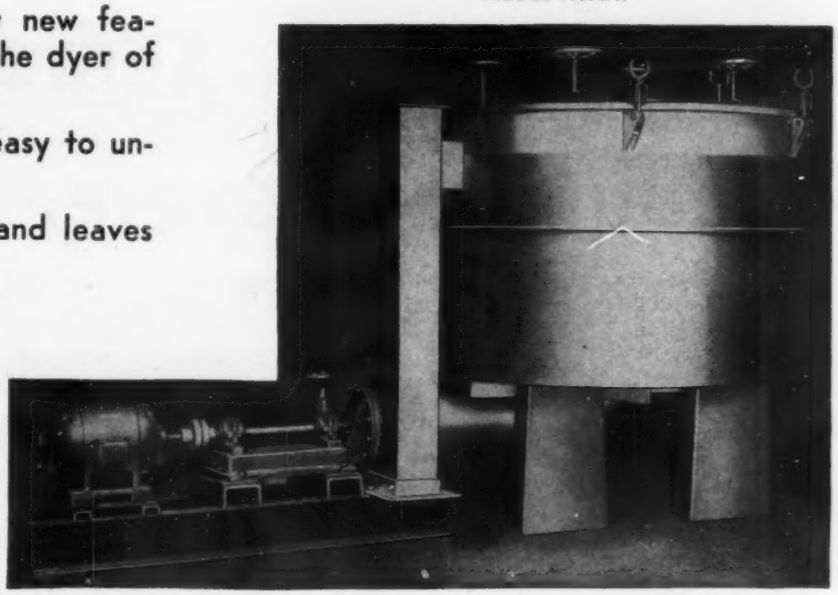
MODEL NUAPR

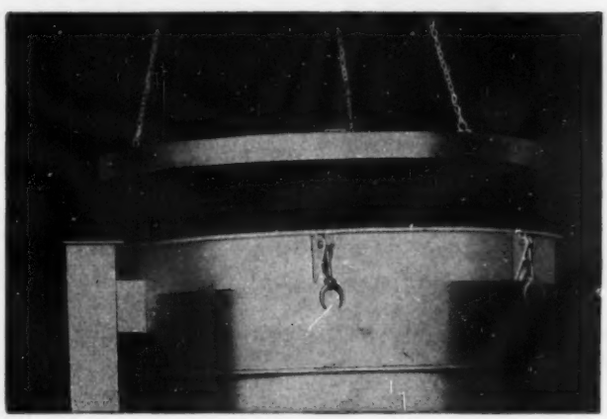
This machine has many new features that will appeal to the dyer of wool raw stock.

It is self-loading. It is easy to unload.

It assures even dyeing and leaves the stock undisturbed and in excellent condition.

It is economical to operate.





This machine is easy to unload. It has a removable perforated plate (shown above) which forms the bottom of the dye tank. The entire batch may be removed from the tank in one block by an electric hoist and dumped wherever desired.

THE MODEL NUAPR RAW STOCK DYEING MACHINE IS SELF-LOADING

By *blowing* the raw stock into the machine and circulating the water downwards, the stock *packs itself* downward.

When this machine is used there is no felting, no channelling, no fibre disturbance.

The steam intake is located in the dyestuff feeding tank, which is separate from the dye tank. The dyestuff is first distributed by a propeller before reaching the material, giving a steady flow of liquor at low pressure even at the boiling point.

Other advantages include: Easy sampling without opening the machine - - automatic reversing device - - low power consumption and operating cost - - exceeding low liquor rate. All Stainless construction.

Standard • Fabricators

INCORPORATED

355 WALTON AVENUE • NEW YORK 51, N. Y.

BUILDERS OF

Cotton and Wool Dyeing Machines — for Beams — Package — Raw Stock — Skeins — Rayon Cakes — Dye Spindles — Perforated Tubes — Centrifugal Pumps — Extractors and Dryers.

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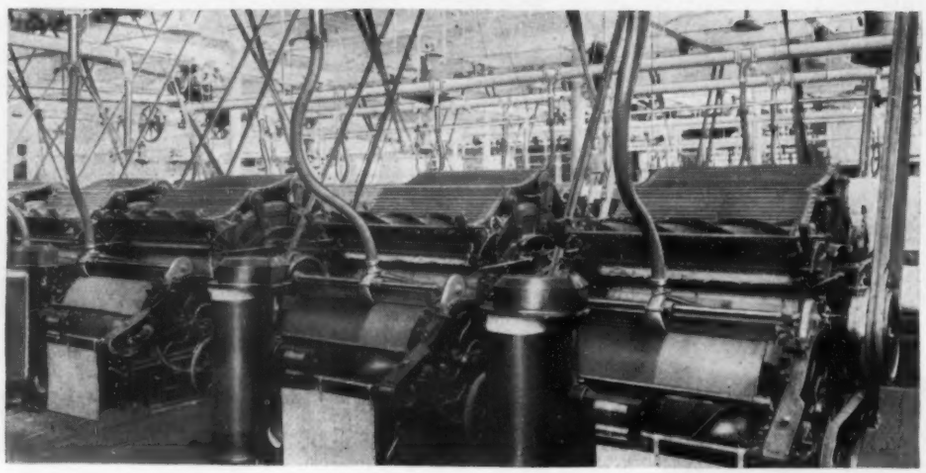
		Sao Paulo, Brazil, S. A.	Bogota, Colombia, S. A.	Fort, Bombay, India

We make our card stripping PAY DIVIDENDS— 4% greater production per card

ABINGTON

VACUUM CARD STRIPPING SYSTEM



Here is a card room in which 554 cards are equipped with the Abington Vacuum Stripper. This system automatically strips cylinder and doffer in one operation. One man can strip 675 cards per 8-hr. shift. In addition, Waste Stations are provided which collect flat strips, comber noil and other process waste, all waste and strips being delivered by vacuum piping to a central waste house, which may be located within or outside the main mill.

In hundreds of mills, results like these---

***Request:* "COTTON STRIPPER CATALOG"**

Nearly 900 mills have turned a nuisance operation into an advantage, obtaining greater production, improved quality and lower costs, as follows:

1. Production increased 4% or more because of less down time for stripping.
2. Direct stripping cost reduced 60% to 90%.
3. Stripping 100% by vacuum (no brush touches the clothing) keeps card wires in better condition with less frequent grinding.
4. Extra thorough stripping gives cleaner sliver, less fly, better quality of product.

One mill states: "One man alone strips 225 cards 3 times daily." Another says: "We only have to grind 2/3 as often to keep wires in good condition."

Write NOW for full information

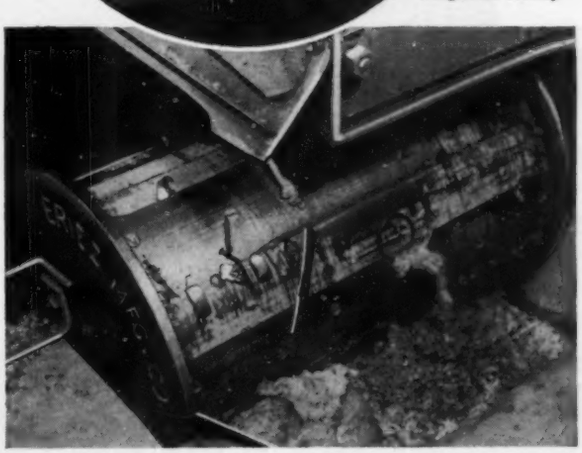
ABINGTON TEXTILE MCHY. WKS. ABINGTON, MASS.
Card Strippers • Weavers' Knotters • Yarn Dyeing Systems

FRED H. WHITE, GENERAL MANAGER—SOUTHERN OFFICE, JOHNSTON BUILDING, CHARLOTTE, N. C.

Stop TRAMP IRON Damage

Spiked Apron Magnet

Magnetic Hump



Magnetic Pulley

with Eriez NON-ELECTRIC *Permanent* MAGNETS

THESE three installations are typical in showing how hundreds of Eriez users in the textile industry have eliminated tramp iron from their processing lines . . . how they have thus bought positive insurance against fires and damage to processing machinery. Your choice of Eriez Non-Electric Permanent Magnetic Protection is profitable too! First cost is last cost . . . no rectifiers, transformers, or other electrical gadgets needed. Operating and maintenance costs are cut to zero! Whatever your separation needs, there's an Eriez to fit the job. Eriez Non-Electric Permanent Magnetic Protection is engineered to fit your requirements efficiently and economically . . . Let us send our nearest Eriez Engineer to consult with you.

CLIP AND MAIL TODAY

Please send bulletin No. 104 A and the following: TI-2

Data on Eriez Magnets for:

☐ Wool ☐ Cotton ☐ Worsted ☐ Other processing lines

Eriez data on: ☐ Gravity Conveyor ☐ Mechanical Conveyor

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Name.....

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See our Exhibit Booths 75-76 International Textile Expo.

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ERIEZ MANUFACTURING CO.

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SULPHONATED ESTOLS

Economically Supplant Sulphonated Oils and Tallows

Possess excellent color and odor properties.

Exhibit unusually good aging characteristics.

Do not liberate acrolein when heated.

Do not foam excessively.

Contain no mineral oil, or resinous, pectic or proteinaceous impurities.

- **SULPHONATED ESTOL F** for users of sulphonated oils
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(Samples and literature upon request)

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THE LONG HAUL

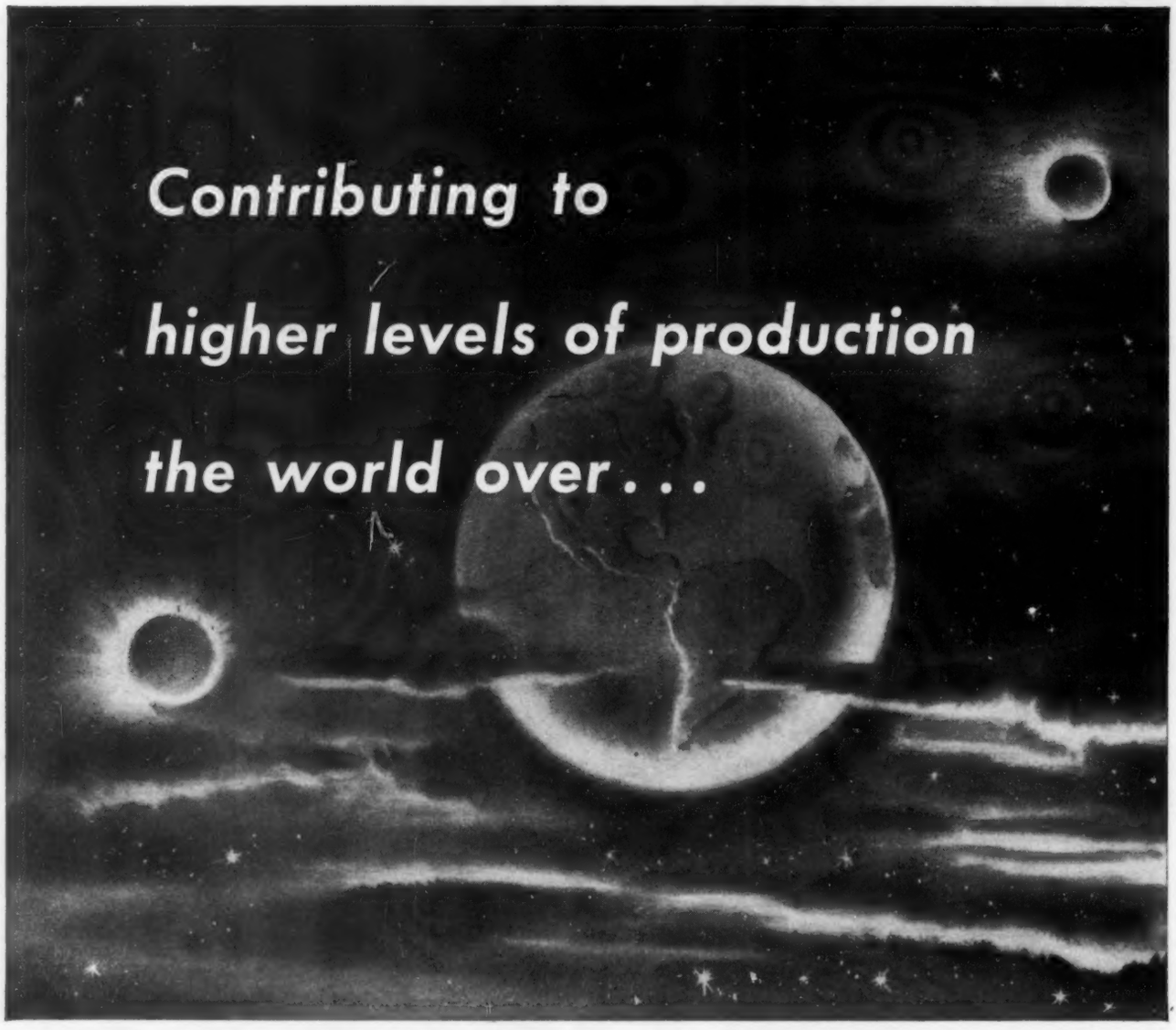
Maintenance of power-transmission equipment in manufacturing rates a high priority, and often at an equally high cost. The way to circumvent continued high cost of upkeep and repair is to install quality belting *properly.*

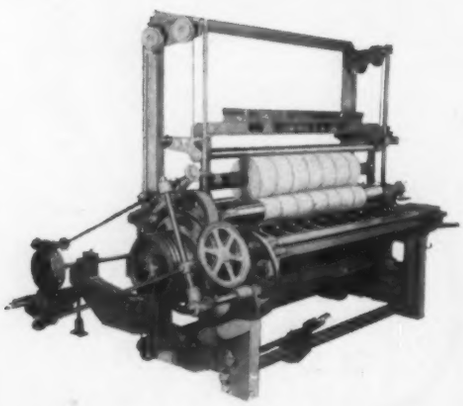
We recommend with confidence our *long-life, low-stretch, extra-grip* PIVOTAN, properly adapted to your needs. Then watch your "long haul cost curve" come down!

Southern Belting Company - Atlanta

Manufacturers and Warehouse Distributors

Leather Belting	Rubber Belting	V-Belts and Sheaves	Fiber and Metal Pulleys	Rockwood-Southern Pivoted Motor Drives	Westinghouse Motors





CAMACHINE 9-5, a versatile slitter and rollwinder for fast production of top quality rolls of all types of fabrics, from gauze to heavy weatherstrip. Produces firm, clean-cut rolls up to 24" rewound diameter. Slits strip as narrow as ½". Write for illustrated literature.

SWIFT CAMACHINES are singing a song of production in every continent of this world. Side by side with other great products of American engineering skill, Camachines are helping the peoples of all countries to rebuild toward a better life. At home, Camachines are meeting every industrial slitting and roll-winding problem to help boost production to the higher levels which must be achieved in the years ahead. For competent assistance with your roll production problems, consult

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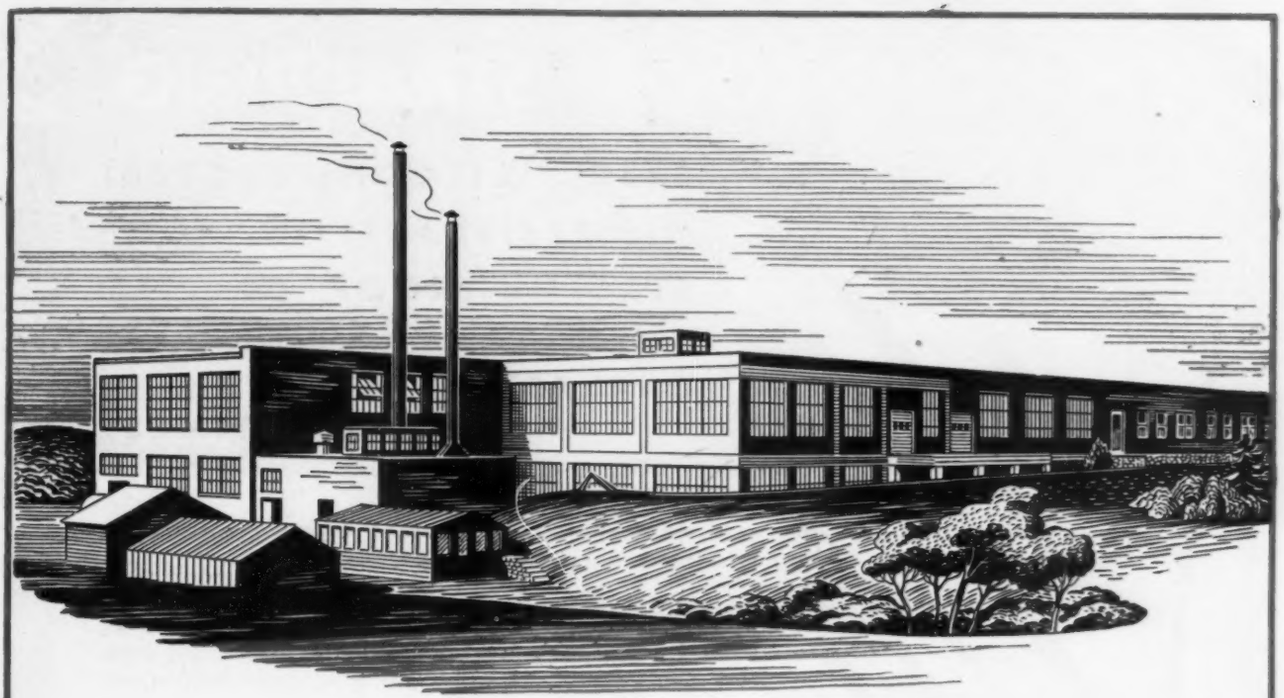
Camachines

FOR FAST, TOP QUALITY ROLL PRODUCTION

. . . the world over



HEADQUARTERS FOR SIZE

THE FACT that we are the nation's largest producers of sizing is important only as indicating the superior qualities of SEYCO Sizing in textile production.

SEYCO Sizing is scientifically formulated to produce a tough, elastic, pliable film, which lays the fibers smoothly; reducing friction, breakage and shedding to the minimum.

SEYCO Sizing is sufficiently anchored by proper penetration, but is easily removed. Its deliquescent feature protects against over-drying. SEYCO Sizing is the result of more than 40 years experience and constant research.

Many mills tell us that SEYCO Sizing makes for fewer interruptions in production and greater uniformity of product.

Our technical service men, backed by our large modern laboratories, will gladly cooperate with you in getting best results from SEYCO Sizing.

Write today for full information about the revolutionary Niagara Twist-Setter. *No moving parts.* Use it with SeyCo Penetrants for best performance

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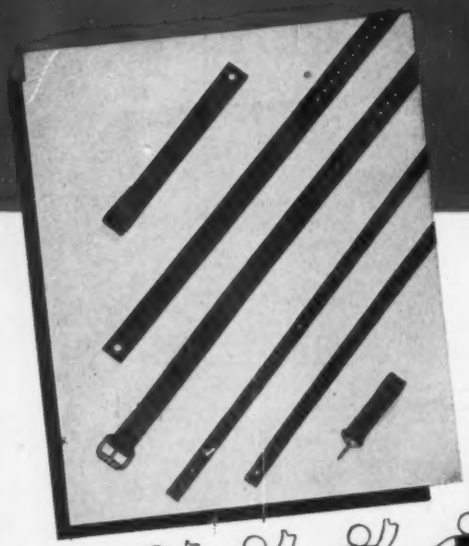
★ SPECIALLY CONSTRUCTED!
★ OIL RESISTANT!
★ STRETCH-PROOF BUCKLE HOLES!
★ OUTLASTS LEATHER MANY TIMES!



Another famous Emmons E-Man Presentation:

Emmons Loom Strapping is manufactured by Emmons to your sample or specifications. B. F. Goodrich Co. supplies the material, especially constructed for the purpose. This material is made up of layers of strong, heavy duck, impregnated with a soft pliable neoprene friction and is very resistant to stretching.

Emmons Loom Strapping is available in any length or width and in two thicknesses, 3-ply—3/16" and 4-ply—1/4". Eyelets, rivets, buckles, etc., can be supplied.

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SELVAGE HARNESS
MAIL HARNESS
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SLASHER AND STRIKING COMBS
EMMONS LOOM STRAPPING
(Manufactured by B. F. Goodrich Co.)
RUN-RITE PLASTIC SHEAVES
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McLANATHAN LEATHER PRODUCTS
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EMMONS

WEAVE ROOM EQUIPMENT

The TUFFERIZING PROCESS—developed and exclusively owned and used by Howard Bros. cuts and forms wires with an accuracy never before obtained in the making of card clothing. The wires are formed with precision and placed accurately in the famous Tuffer Foundation . . . when drawn on the cylinder they fit snugly—*sides perfectly parallel and every point in place.*

"Tuffer" Men help you to get Better Quality

Howard Bros. representatives are qualified to help you get the best possible results from your carding equipment. They are men of specialized training and experience who can give valuable assistance in improving quality and increasing efficiency in YOUR card room.

Here's what one large textile unit says: "We appreciate the excellent service your company has given us in the past. Your man came up and worked in our carding department, checked the condition of our card clothing, *doing an excellent job and to our benefit.* It is a pleasure to put our appreciation on the dotted line."

Time and time again we receive similar words from Howard Bros. customers.

Talk over your particular problems with a Howard Bros. representative. There's no obligation on your part. Get in touch with your nearest Howard Bros. plant or office.

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WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga., and Gastonia, N. C.
Branches: Philadelphia, Pa., and Blanco, Texas
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A-6

TUFFER CARD CLOTHING *IMPROVES PRODUCTION ALL ALONG THE LINE*

BEST IN BOBBINS

BOWEN-HUNTER

Manufactured

from

VERMONT
ROCK MAPLE
BIRCH
and
BEECH

IF IN URGENT NEED OF CARD ROOM BOBBINS
PLEASE SPECIFY BIRCH AND BEECH ON YOUR ORDERS

BOWEN-HUNTER BOBBIN CO.

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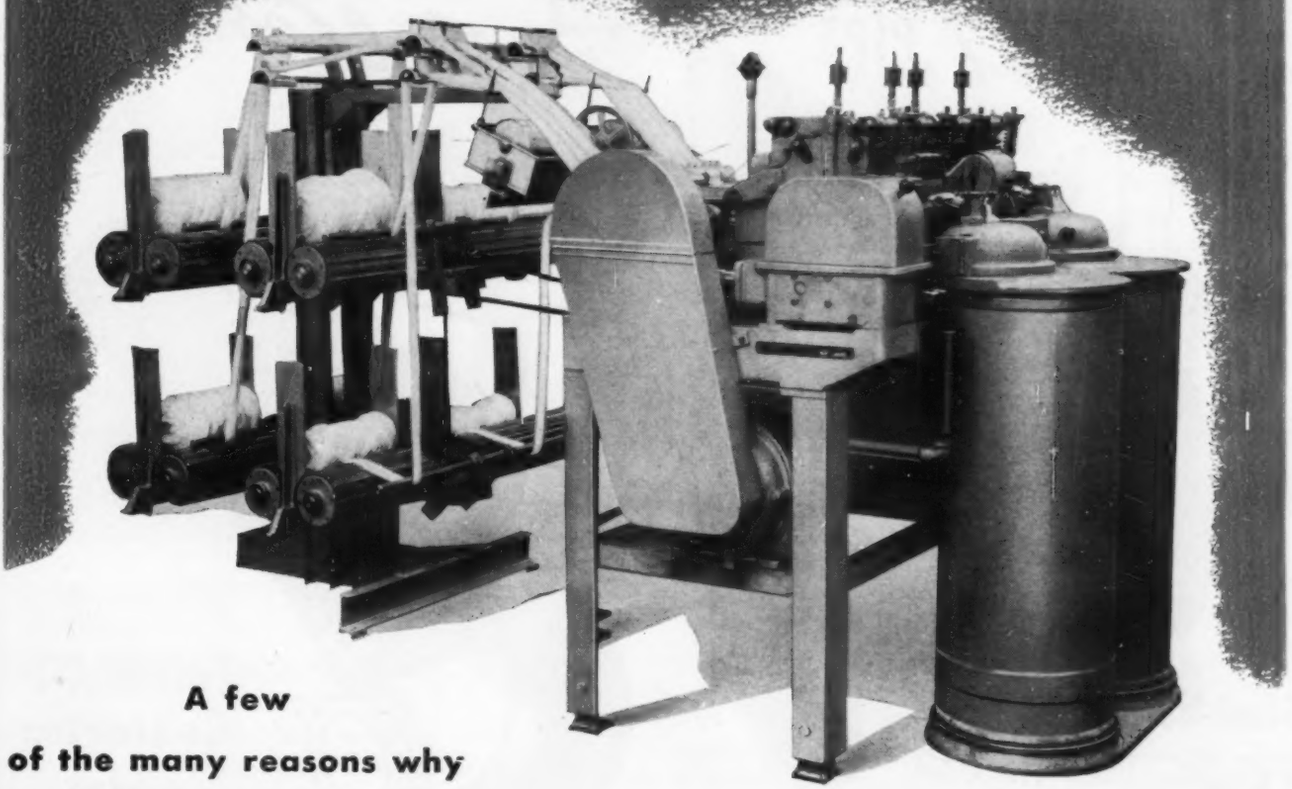
Southern Representatives:

THE McLEOD COMPANIES, GREENSBORO, N. C., AND GREENVILLE, S. C.

Now-

a more practical adaptation of pin control

IN WORSTED TYPE YARN PROCESSING!



A few

of the many reasons why

The WARNER & SWASEY

PIN DRAFTER

merits

YOUR INVESTIGATION

- *It produces a more uniform sliver, resulting in more uniform yarn having evener count, greater strength.*
- *It is adaptable to the handling of either ball top or combed sliver, Bradford or French comb.*
- *The final result? Increased efficiency of spin—better cloth!*

You Can Do It Better, Faster, for Less... with a Warner & Swasey

GET THE FACTS SEND THIS COUPON TODAY

WARNER & SWASEY
Cleveland
TEXTILE MACHINERY DIVISION

THE WARNER & SWASEY CO.
Textile Machinery Division, 5701 Carnegie Ave.
Cleveland 3, Ohio

Yes, I would appreciate additional information about the Warner & Swasey Pin Drafter.

Name ..... *Title* .....
Company .....
Address .....
City ..... *Zone* ..... *State* .....

C-248

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FAST and EASY on 1" to 2" PIPE

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End wrench for pipe in coils or on flat surfaces.

RIDGID Guarantee means no housing repairs or expense at all—ever

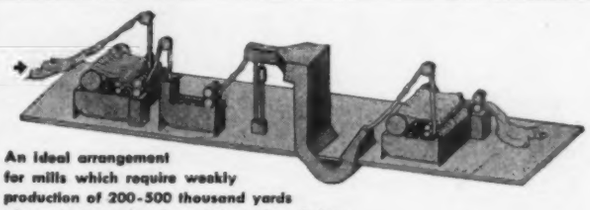
● *For your worker*— comfort grip I-beam handle he can throw his weight around with; adjustment nut that spins easily in all sizes, 6" to 60"; pipe scale on hookjaw that fits it to pipe without time waste. *For your business*— guarantee against warp or break of housing, no replacement expense and bother, fewer spares needed, *plus* profit from fast, easy work. Follow the lead of enthusiastic users of millions of RIDGID tools—ask your Supply House for these efficient pipe wrenches.

RIDGID **WORK-SAVER PIPE TOOLS**
THE RIDGE TOOL COMPANY • ELYRIA, OHIO

DU PONT

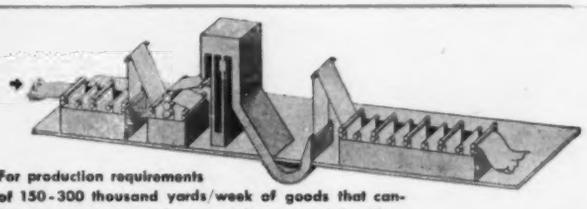
has a Continuous Peroxide Bleaching System for most bleaching needs

ONE-STAGE ROPE SYSTEM



An ideal arrangement for mills which require weekly production of 200-500 thousand yards of goods averaging 3 yards/pound or lighter.

ONE-STAGE OPEN-WIDTH SYSTEM



For production requirements of 150-300 thousand yards/week of goods that cannot be rope-processed—especially successful with a wide range of heavy fabrics.

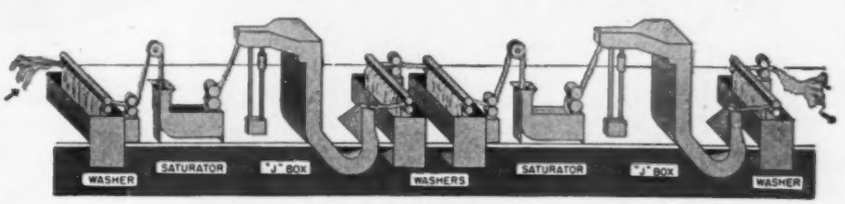
LOOK INTO THESE SYSTEMS NOW!

You'll find them . . .

1. **Just what you need** to produce quality bleaching at lower over-all costs.
2. **Flexible**—readily adapted to speedy, uniform processing.
3. **Easy to set up,** operate and control.
4. In use by **many leading mills.**

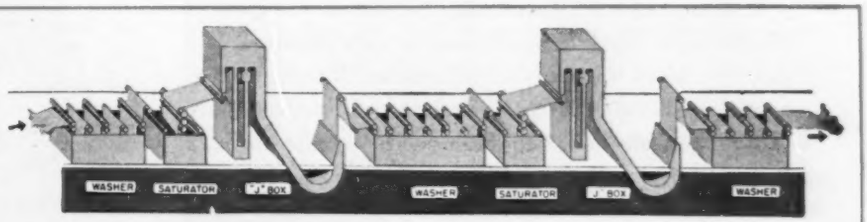
TWO-STAGE ROPE SYSTEM

For processing a wide variety of fabrics; print cloths, sheetings, shirting, shade cloth, etc.; handles 1-¼—1-½ million yards/week of 4 yd. goods.



TWO-STAGE OPEN-WIDTH SYSTEM

For cloth that cannot be handled in rope form. Operating speed generally between 75 and 125 yards/minute. Any degree of bleaching obtained by adjusting peroxide strength.



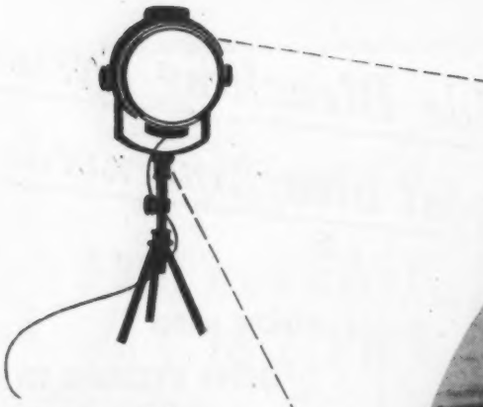
Send for this NEW BOOK!

It shows typical continuous bleach layouts designed to fit the requirements of various plants. For a copy just write: E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.

DU PONT CONTINUOUS PEROXIDE BLEACHING

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DU PONT



Medley Drawing is in the Textile Spotlight for 1948!

It's Medley in '48
It's a good thing to include in your plans for '48. Medley can supply new frames equipped with 2 roll, 8 ends drawing, or 4 roll, 6 ends conventional, each featuring the Medley sealed-in ball bearing top roll, the quiet helical gear drive — or your present frames can be changed over to this more efficient drawing. A card or a call will get you the whole story.

Mills throughout the industry are turning to Medley Drawing. Day in and day out Medley Drawing Frames are turning out a more uniform sliver—they are reducing ends down to a minimum—they are helping mills meet production schedules by increasing efficiency.

Mill men who are faced with increased production schedules are checking operations in each department—carefully. Many who find the all important drawing process slowing production because of outmoded equipment are turning to Medley Drawing Frames. They praise Medley's "plus-features"—the sealed-in ball bearing top rolls, permanently lubricated—the noise-reducing helical gear drive. They like Medley Frames because they can be adjusted to draw any fiber—cotton, wool, synthetics, ramie, in staple lengths from 5/8 inch to 13 inches.

Yes sir, Medley Drawing is really in the 1948 spotlight. If production is a problem in your mill—call or write Medley today for the counsel of a trained textile or mechanical engineer.

The MEDLEY System, Inc.

400 32nd ST., COLUMBUS, GEORGIA

Medley Manufacturing Co., Columbus, Ga. • Gastonia Roller, Flyer & Spindle Co., Gastonia, N. C. • Allan Textile Machine Co., Pawtucket, R. I.

10 YEARS of Three-Shift Service in a BUDAPEST MILL

Actual photograph of belt after 10 years (note brand)

. . . a MANHATTAN story of *Condor* CONE BELTS that outlasted previous types 30 to 1

Mr. H. M. Zilahi, Superintendent-Manager of the Goldberger Spinning and Weaving Mills in Budapest, Hungary, is a staunch believer in Manhattan quality. We quote the key paragraphs from a letter he sent to Passaic – entirely unsolicited:

"Ten years ago I visited some cotton mills in the United States and heard about the advantages of the 'CONDOR' cone belt for the flyer frames.

"The best type of our leather cone belts were running under our severe conditions (3 shifts, etc.) 3 months only.

"In 1937, we fitted therefore our flyer frames with 'CONDOR' cone belts, and now the wonder: 90% of those 'CONDOR' belts are running till now. After 10 years of running (mostly 3 shifts) they are in good condition."

During the war under pressure production, when the plant was bombed and its buildings badly damaged, Manhattan Condor Cone Belts came through to outlast the best previous types, 30 to 1. . . . And they are still in good shape, judging by the photographs that came from Budapest, (one of which is shown above).

Manhattan's line of Condor Rubber Products for the textile industry is consistently dependable—outstanding in quality and engineering. Make MANHATTAN your choice.

RAYBESTOS R M MANHATTAN

RAYBESTOS-MANHATTAN INC.

Keep Ahead with Manhattan

MANHATTAN RUBBER DIVISION PASSAIC, NEW JERSEY

If you want –

greater breaking strength . . .

lower sizing costs . . .

better weave-room results . . .

then you'll want

HOUGHTO-SIZE CW

When you find a warp size softener that gives you an increase in breaking strength as much as 10% greater than that obtained with your former size formulation . . .

And when you do this—as many mills are now doing—with *one-third* less softener in the size kettle . . .

And further, when the new softener contains no animal fat, therefore is lower and more stable in price . . .

And lastly, when the warps thus sized are found to weave better and result in increased production . . .

Then you're going to be mighty glad you learned about HOUGHTO-SIZE CW, Houghton's sizing compound, and you're going to keep using it. For full details and test, write

E. F. HOUGHTON & CO.
Philadelphia or Charlotte

Enlarged photos such as above are a feature of the Warp Size Check-up Test, exclusive with Houghton. They show vividly what various size formulae do to improve fiber lay.

For better *Textile Lighting* specify Westinghouse

THE NAME YOU KNOW IN LAMPS...

Westinghouse Fluorescent Lamps bring to industry a practical means of obtaining the high intensity lighting needed for modern speed production. They provide an even distribution of light, are cool burning and duplicate most closely the color of outdoor daylight. Westinghouse Fluorescent Lamps provide an economical way to speed production, decrease spoilage and reduce accidents. For better See-Ability in your plant or office . . . for a lighting investment that will continue to keep costs down and increase the productivity of both men and machines...specify Westinghouse—the name you know in lamps.

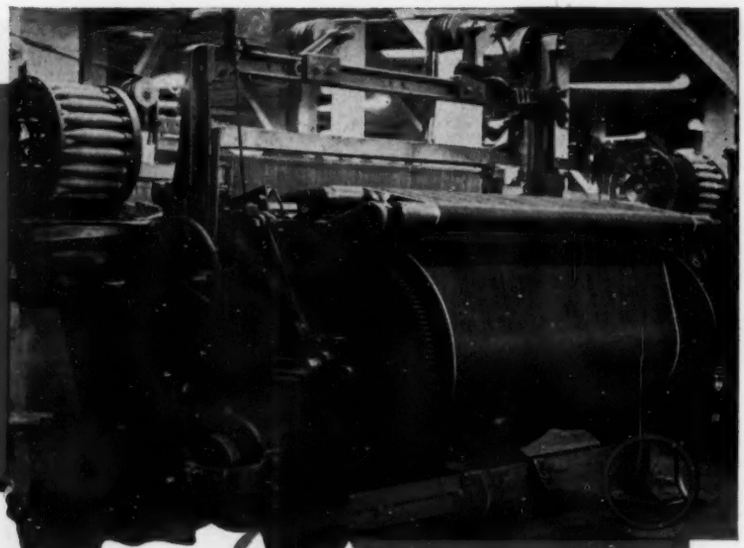
Send for free booklet A-4759 "A Practical Guide to Westinghouse Fluorescent Lamps and Equipment."

Westinghouse *Lamps*

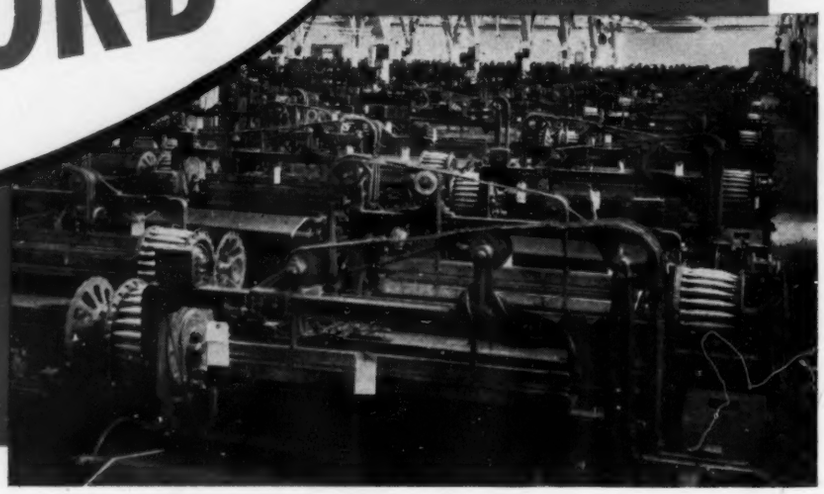
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

AVONDALE
ELIMINATES COSTLY FLOOR DAMAGE BY MOUNTING LOOMS ON

UNISORB



Draper Model X Looms installed at Avondale Mills on UNISORB.



NO BOLTS
NO LAG SCREWS
NO HOLES IN FLOORS

Avondale Mills, Pell City, Ala., anchors its looms on UNISORB.

The hole-drilling and floor damage that go with bolt and lag screw mounting are thus eliminated . . . and another textile manufacturer's valuable floors protected by UNISORB Mounting.

This modern anchoring method is simple, quick and inexpensive. A special cement binds the UNISORB pads to the machine feet and the floor. Permanent set absolutely prevents any riding.

UNISORB absorbs from 60% to 85% of transmitted vibration and noise. This helps you save on machine repairs and building maintenance, helps you provide employees with quieter surroundings — and helps them work more efficiently.

Send for sample and complete specifications. Ask for your copy of "Why it Pays to Anchor Your Machines with UNISORB."

LOOK FOR THE RED CENTER AND UNISORB BRAND MARK

THE FELTERS COMPANY

210-X SOUTH STREET, BOSTON 11, MASSACHUSETTS

Offices: New York, Philadelphia, Chicago, Detroit
Sales Representatives: San Francisco, St. Louis
Southern Representative: Industrial Supply Co., Clinton, S. C.
Southwest Representative: Textile Supply Co., Dallas, Texas
Mills: Johnson City, New York; Millbury, Mass.; Jackson, Mich.

Foreign Representatives: ARGENTINA—PARAGUAY: Roberto Zander, 345-353 Juan Jaures, Buenos Aires; BRAZIL: Cia Industria E. Comercio, Glossop, Rua Visconde de Inhauma, 62, Caixa Postal, 265, Rio de Janeiro; Rua Florencio de Abreu 438/442, Caixa Postal, 1546, Sao Paulo; CHILE: W. L. Robinson, Casilla No. 4075, Santiago; COLOMBIA: C. E. Halaby & Co., Ltd., Airmail Box 650, Medellin; ECUADOR: Richard O. Custer; S. A., Guayaquil St. 937, P. O. Box 2753, Quito; URUGUAY: Roberto Zander, Montevideo Ltda., Calle Uruguay, 1711, Montevideo; VENEZUELA: Herbert Zander & Co., P. O. Box 1291, Caracas; MEXICO: Slobotzsky, S. A., Avenida Uruguay 55, Apartado 1192, Mexico, D. F.; EUROPE: Switzerland, Ernest Gerabach, Zurich; EASTERN MEDITERRANEAN AREA: The Arlind Corp., 509 Madison Avenue, New York 22, N. Y.

How to Increase Production

...without adding manpower!

● It is an established fact—proved by companies in every line of business—that Glidden can show you how to increase production without adding manpower. The simple answer is the scientific use of white and colors in Glidden SPRAY-DAY-LITE, according to a *Sight Perfection* painting plan which Glidden experts will design especially for your plant.

With this *Sight Perfection* plan and SPRAY-DAY-LITE, America's fastest-selling interior maintenance paint, companies have upped lighting efficiency *as much as 102%!* Provide better visibility—create safer, pleasanter, morale-building working conditions this way and you can measure the results in increased production and lower costs! For 18 years, since establishing the paint industry's first laboratory devoted exclusively to research on functional color, Glidden has been developing this service which is now offered to you without charge. Start things moving by returning the coupon below today!

Glidden

Pacemaker in Paints

THE GLIDDEN COMPANY, Dept. WW-2
11001 Madison Ave., Cleveland 2, Ohio

☐ Please send literature to indicate the practical and thorough nature of the *Sight Perfection* painting program you will design especially for us.

☐ You may have your representative call and demonstrate SPRAY-DAY-LITE in our premises without obligation on our part.

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CITY, ZONE, STATE.....

Reduce maintenance costs . . . get better service from this

NEW *improved* PICKER

DAYTON
THOROBRED
Picker stick hole tilts
This insures correct shuttle contact, eliminates striking at an angle.
Stronger face block
Specially faced to take continuous shuttle poundings.
Improved fabrics, compounds
Made of special Dayton fabrics and compounds for longest life.
Front edges rounded
Hanging fillings are eliminated with this new rounded front edge.
Streamlined
To eliminate wear of lay-in strap.

On today's fastest looms, Dayton Thorobred Loop Pickers perform with highest efficiency at less cost. Made of special fabrics and synthetic rubber compounded with unusual resilience, Dayton Pickers are molded in one-piece, super-strong units that give increased service, longer life. Designed with a flared bottom, Dayton Pickers are built for easy application. There is nothing to break, nothing to expand. Their design includes a specially patented symmetrical loop construction which anchors the picker onto the stick and holds it in the correct contact position indefinitely. If you aren't using Dayton Pickers, it will pay you to get the complete story. Write Dayton Rubber, Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Bldg., Greenville, South Carolina.*

Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

Authoritatively Speaking

S&R's editor has had a couple of sessions with hospitals these past few months. He knows now how women like to talk about their operations.

He has joined the group of those who, having been under the surgeon's knife, suddenly become authorities on the subject of operations . . . simple, complex, compound or what have you . . . ready to talk to those who will listen, and write to those who will read. Conservative thinking over his recent experiences has developed these tips:

No. 1. Don't go to a surgeon unless you are just aching to be cut up. His business is to cut (his children don't eat if he doesn't cut). All he knows is the cutting-up trade, so he has the advantage over you and he'll sell you a job every time.

No. 2. If you're going to the hospital, plan it as though you were going on an extended trip, which it probably will be if they can keep you there, and make reservations well in advance. Carry your confirmed reservation with you, or be prepared to tip the "desk clerk" a fin to get you in . . . it used to be costly just to get out, and now you may find it expensive to get in.

No. 3. Don't expect a glamour gal to hold your hand; they're so rushed with patients they use stop watches and a slide rule to get the pulse from two pulsations. If she's starry-eyed, don't think you caused it; she's thinking of the Romeo who waits for her when the 10 o'clock shift is made.

No. 4. Food. Now there is something. You're either feeling so sick that the sight of a tray irks you no end, or you feel so good that you wonder why they don't put more than a sample of everything on the tray. Restaurants with the "no substitution rule" must have learned that from hospitals where you eat it or you leave it.

No. 5. Time was when there was but one kind of an anaesthetic. Now you have as many to choose from as there are chances to play a slot machine before you hit a winner. Perhaps the high point of this writer's experience was to be interested in how the anaesthetist was getting the needle into a vein and being strapped down—and the next thing he remembered was being told by the "doc" back in his room, what a good job was done.

There are really only two things that if someone could discover how to accomplish them would bring them the undying gratitude of a great host of people (patients). One is to discover a miraculous way for the healing to be accomplished upon completion of the operation—that is to say, eliminate convalescing. The other is how to keep from having to pay the surgeon . . . who wants his children to eat anyway?

◆

Had to Go Back for This One

"Would you please be good enough to forward to my attention any information including textbooks, etc., regarding dyeing and glazing of cotton yarn?"

E. GOTTSCHALK
Purchasing Agent
Paranite Wire & Cable Corp.
Jonesboro, Ind.

(The August 1939 issue and the author, W. I. Finnetney, accommodated Mr. Gottschalk).

◆

Effective Publicity

Hats off to Oakite Products, Inc., for a different Christmas letter to the editor. Oakite's publicity men capitalized on their trade. They have not been ones to bombard T. I. through the year with news releases (though they are no shrinking violets either). Their Christmas letter started out with an admission of an editor's troubles of having a constant barrage thrown at him . . . then modestly admitted they had done their share . . . then assured the editor this letter had no request, nor required action . . . and wound up with a very friendly "Greetings." We stamp it "OK."

◆

My Private Secretary

Since there are only ten months shopping time before next Christmas, you can begin planning what to give your supervisors—a copy of "My Private Secretary," as did one thoughtful superintendent.

◆

Maintenance Articles

"Would you please send us a reprint of 'Preventive Maintenance Program at Dan River Mills.' Thank you."

W. WHIPPLE
Nashua Mfg. Co.
Nashua, N. H.

(The reprints requested consist of five articles appearing during 1946, in serial form, as prepared by Frank L. Byrd, then of Dan River Mills. A few reprints are available.)

◆

Who Makes Them?

"We are interested in purchasing 51 gauge hosiery knitting machine slot saws. Would you please send us a list of names [those who make them] at your earliest convenience."

DUBLIN HOSIERY MILLS, INC.
Dublin, Pa.

(We have had several such requests for this product, but evidently former manufacturers have ceased making them. Any information on this subject will be helpful to our knitting readers.)

◆

Employee Publications Praised

"I have just finished reading the article on employee publications in your December, 1947, issue, and I want to tell you what a valuable contribution I think you have made to our industry in publishing this excellent story.

"It is encouraging to see that more and more textile mill employers are turning to some type of employee publication as a means of providing a channel through which they may communicate with their workers and which may be used to improve employee morale and good will.

"The article should be quite helpful to employers who already have such publications, and to those companies who may be considering establishing them, and by and large, it should be helpful to the entire industry in improving the practices and techniques involved in this important area of labor and public relations.

"I congratulate you once more for the good job that you are doing in publishing a paper that consistently contains factual information of interest and value to our industry."

T. M. FORBES
Executive Vice-President
Cotton Manufacturers
Association of Georgia
Atlanta, Ga.

(Reprints available.)

"We have just finished reading your most interesting article on mill publications which appeared in your December, 1947, magazine. We think you have brought out some most pertinent facts and agree thoroughly with the statements brought out in the article. We are enclosing a few copies of our plant publication for your observance."

EVERETT J. JONES
Textiles, Inc.
Gastonia, N. C.

◆

Without Exception

"Before sending our renewal subscription recently, we made a survey of supervisory employees to determine what they thought of TEXTILE INDUSTRIES. Without exception, the response was enthusiastic."

B. T. WEBB
Industrial Relations Manager
Powdrell & Alexander, Inc.
Danielson, Conn.

◆

"Visual Aids" Again

"Thank you for the 10 copies of the reprint entitled 'Visual Aids for the Textile Industry.' We can inform you that we sent 3 copies to associates in Denmark, Sweden, and Finland."

NORSK TEXSTIL TEKNISK FORBUND
Bergen, Sweden

(In connection with visual aids, we understand that the Textile Resin Department of American Cyanamid Company has brought out a fine film titled, "It's All In The Finish," a comprehensive presentation of the field of textile finishes.)

◆

1947 Index Reminder

From the Shawmut plant of West Point Mfg. Co. comes congratulations on the new 1947 index. For the time being we are able to handle requests for additional copies of the index. We'll remind you of what we said on this page in the January issue . . . to save all of your issues during the year so that your 1948 index will be most helpful when you want to check back on some previous article.

◆

Speaking of Complete Files

"I find that I have all of 1947 (issues) from January through July and the October issue. Since I have bound copies from 1931 on, I do not want to have a break now. I would like very much to secure the missing issues."

ALLEN JONES
Lane Cotton Mills Company
New Orleans, La.

◆

Nomogram

"If it is possible we would like to have three copies of the Nomogram given on page 98 of your September, 1947, issue of TEXTILE INDUSTRIES."

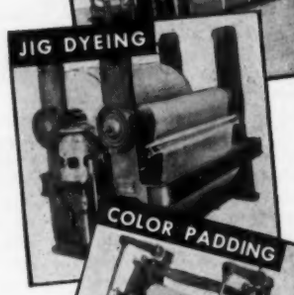
W. B. LANE
Head, Testing Dept.
Research Division
West Point Mfg. Co.
Shawmut, Ala.

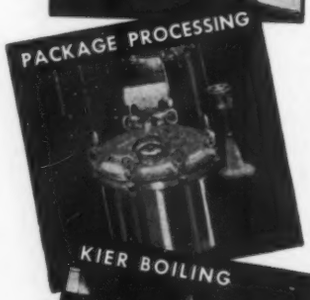
SHORTS and REMNANTS

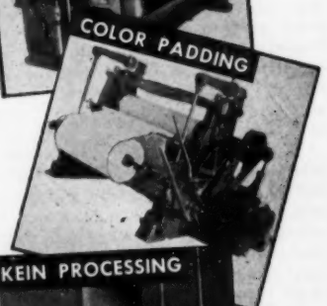
By M. L. D.

Jack of all Trades

—and Master too!

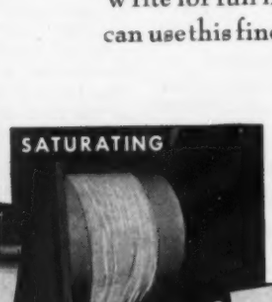






TRITON 770 CONCENTRATE

Mill men know TRITON 770 CONCENTRATE as a dependable detergent, wetting and emulsifying agent. But did you ever realize how *many* different jobs TRITON 770 CONCENTRATE does in the textile mill? Glance over the applications shown on this page . . . they show *some* of the processes in which this dependable chemical helps in making textile mill operations more efficient and more economical. Write for full information on how you can use this fine chemical to advantage.



THE SERVICE THAT BUILT OUR BUSINESS CAN HELP YOURS

Our business has been built largely on the practical help we have been able to give our customers, right in their own plants, in adapting Rohm & Haas products to their needs.

Our representatives are men with technical training and practical experience in the use of industrial chemicals. Call in a member of our textile chemicals department when you need assistance in choosing or using . . .

Chemicals for Fine Textiles

TRITON *is a trade-mark, Reg. U. S. Pat. Off.*

Represented in Canada by Rohm & Haas Company of Canada, Ltd., Toronto; and in South America by Cia. Rohm y Haas, S. R. L., Carlos Pellegrini 331, Buenos Aires, Argentina, and agents in principal South American Cities.

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WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Manufacturers of Chemicals including Plastics • Synthetic Insecticides • Fungicides • Enzymes • Detergents
Germicides • Chemicals for the Leather, Textile, Ceramic, Rubber, Paper, Petroleum and other Industries

Textile Industries

FEBRUARY
1948

Good Times Are Good Times to Look Ahead

Waste Reduction and Control

FOR QUITE some time the various economists and agencies have been unable to agree as to whether or not there will be a depression in the near future. Those who a year ago predicted a depression six months hence have already been proved wrong.

Everyone is entitled to his or her own prediction for the future, and with a national election in the offing, it is to be expected that predictions will fly thick and fast—by the law of averages, eventually somebody is going to be right. Perhaps we should be smug and point out that we didn't go along with those predicting an early depression; if we had been wrong, maybe we wouldn't have even mentioned it.

We are still talking good times down our way, and so are most of the people with whom we chat, but we are going to be a bit trite and say that good times are good times to look ahead. Specifically, we refer to waste control.

In textile manufacturing, waste is a big factor. Just to bring it closer home, take the total poundage of raw stock purchased by the mill, figure the percentage of waste made, and then determine how much of a saving can be realized by reducing the waste only one-half of one per cent.

The result is a rather astonishing figure. Yet, by a concerted waste drive, mills have been able to do much better than one-half of one per cent.

Mills can be placed in three groups, with reference to waste: Those that are waste conscious and do a good job of keeping waste at the minimum; those that are periodically waste conscious and periodically achieve a reduction; those that have little knowledge of waste problems and do nothing about it.

A recent survey on waste procedure indicated that a majority of the mills participating do not make periodic tests to determine variations in waste percentages at each process, and half of the participating mills have no waste standards. Some excellent waste systems were being used, and a few mills had separate waste control departments. Where systems were employed, the managements were enthusiastic about the results.

There are recent examples of substantial savings having been realized by the simple expediency of offering a bonus to the supervisor or shift foreman who reduced waste the most for a given period of time. It was a type of contest, and the spirit of competition took hold—the mill couldn't lose.

If waste in processing can be reduced as easily and simply as announcement of a contest on waste reduction, the answer may appear to be, of course, that waste should not have been excessive in the first place, if the supervisor had been on his toes. However, this is not always true.

Reducing excessive waste in a textile plant is a job. And like any other job in a textile plant, a certain amount of training is required. During the past few years the supervisors have been told to push for production; quality was mentioned, but production was the byword. Supervisors became production conscious.

More recently the trend has been toward quality, and no doubt supervisors are getting better quality. It is only natural for them to stress in their own departments what the management emphasizes in the front office.

If management stresses waste reduction, the supervisor will do his best. But the problem of waste, as with any other problem, requires special study and analysis. In many instances supervisors have not been trained in solving this specific problem, but even without training, some results may be expected, if emphasis is placed on waste reduction.

However, if a contest idea can reduce waste, consider how much more effective and lasting the waste reduction campaign can be if the supervisors receive adequate training and if a system is in force for their guidance and for follow-up.

Inflationary Taxes

CONGRESS is now sweating over two very weighty problems—particularly weighty on account of this being an election year. One of these is what, if anything, to do about inflation; and the other is what, if anything, to do about taxation. The Marshall Plan, which is now very heatedly under consideration, is mixed up with both of these other problems, because if, as seems quite necessary, we undertake it, more inflation and more taxes are just around the corner.

It is very doubtful if anything whatever can be done by Congress to alleviate appreciably the disastrous effects of the inflation which Congress itself and the administration were so assiduously creating some years ago. Looking back over some of the editorials in this magazine for the past 10 years, will show that the magazine was constantly inveighing against the increasing inflation created by various unwise national policies. Since 1938, practically everything that could be thought of to say in opposition to continuing inflation had been said, and repeatedly it had been pointed out that the high prices now prevalent would be the inevitable consequence of the devaluation of the dollar resulting from the creation of billions of dollars representing no value.

What we are suffering from today is not inflation, but the consequences of inflation. The inflation was created years ago, and we fail to see anything that can be done about it. We have deliberately diluted the value of our money, and the dollar is simply finding its true level.

Prices generally have changed very little in relation to each other. They have only gone up in terms of money, which is simply another way of saying that the value of money has gone down. To many groups of our citizens, prices have decreased instead of increasing. To practically every farmer, prices have gone down, because the same amount of his own produce will buy more now than it would five or six years ago. To most of our laboring people, prices have gone down, because an hour's labor will buy more than it would five or six years ago. This is particularly true of textile workers. There are very few textile mill employees for whom prices generally have not gone down considerably when measured in terms of the value of an hour's work against the value of a gallon of gasoline or a sack of flour. Workers in cotton textile plants are now making about three times as much in dollars as they did six or eight years ago, while the dollar value of the things they buy has gone up about twice. To these people therefore prices have actually gone down.

It is the people on relatively fixed salaries or fixed incomes of any sort who have universally found that prices have gone up to staggering heights. Millions of persons who are living on the incomes from insurance policies, trust funds, and other forms of savings which are payable at the rate of so many dollars per year, have been cruelly robbed by the constant rise in the cost of living as measured in dollars. This is what inflation always does to the thrifty and the heirs of the thrifty.

Beginning in 1933, our national government adopted a policy of deliberate inflation, and has adhered rigidly to this policy right up to the present time. Very little has been done through all of those years to discourage inflation, and much has been done to encourage it.

MOST PEOPLE are accustomed to thinking of taxes as having a deflationary effect. As we have pointed out before, this is not necessarily the case, and we wish again to point it out. Taxes can be definitely inflationary, and taxes of a very inflationary type have

(*Continued on page* 213)

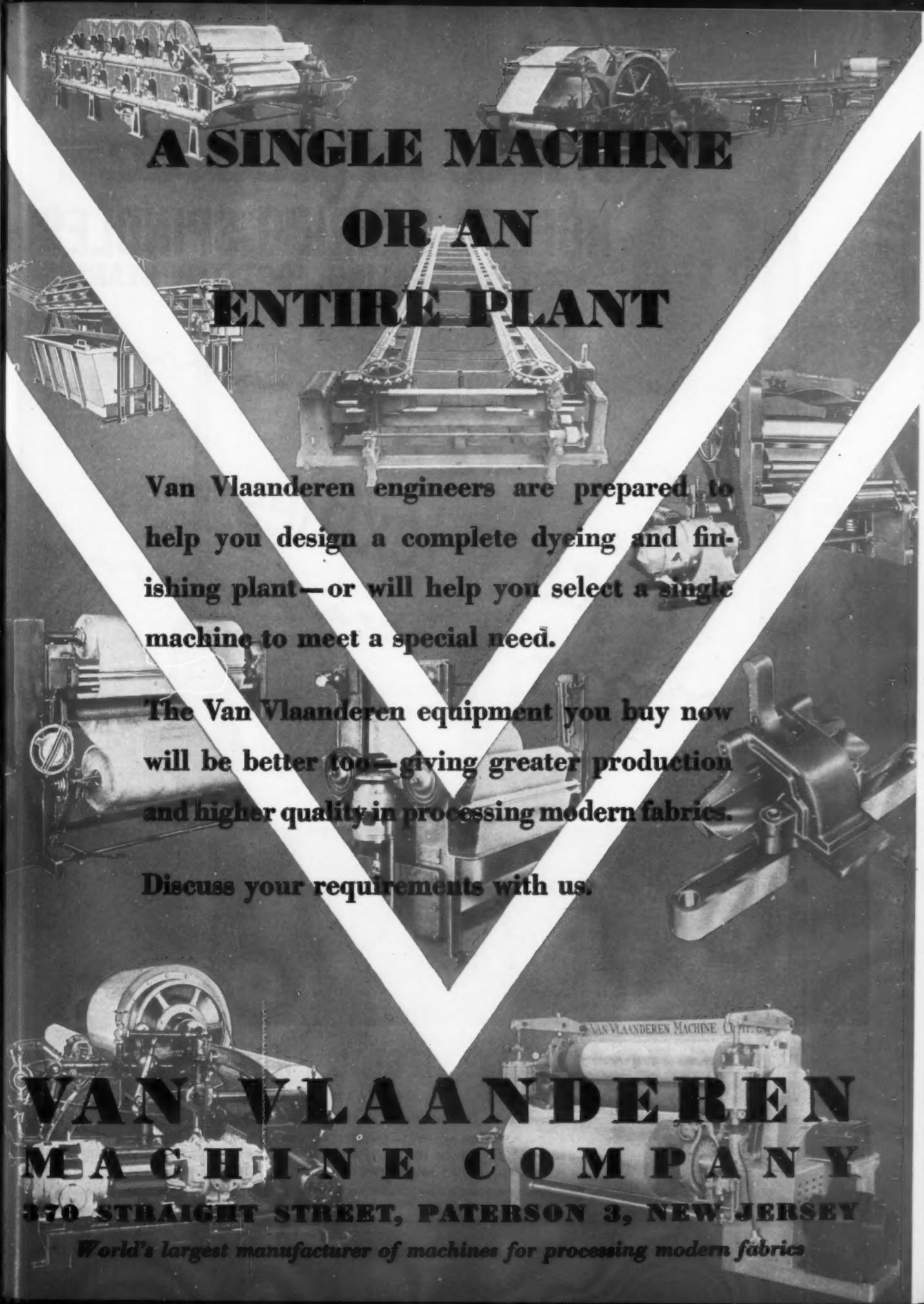
This Issue:

MODERNIZATION and MAINTENANCE

OUR older readers are familiar with the annual Modernization and Maintenance number (February), which again is the theme this year. Heretofore it has been likened unto the all-day dinner on the grounds revival, because from the maintenance viewpoint it permits us to check on many of the things we should already know, or should be doing. From the viewpoint of modernization it shows us what the other fellow has done, and what we could have done.

The articles in this issue are not hypothetical, and they are not the idle musings of a dreamer. The maintenance articles are descriptive of down to earth systems that are now being used successfully by outstanding textile organizations. The modernization articles describe programs completed or under way.

The authors who prepared the information for this special number have endeavored to be of service to other mill men. The editors believe that they have accomplished their mission.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Centralized Preventive Maintenance

at Mt. Vernon - Woodberry Mills (Tallassee)

By L. D. SAYERS
Superintendent
Maintenance & Technical

CENTRALIZED Maintenance, as we define it, is primarily a service organization with its separate payroll, supervisors, and personnel. This department is not accountable in so far as supervision is concerned to any other mill department heads, but at the same time the department is fully aware of the fact that only through satisfied customers can any service organization succeed, whether it be on a commercial or, as we call it, a "charity" basis.

It is, therefore, our aim to serve and to please just as any progressive shop in serving the general public should strive to please if it would be called again; the only difference is that we strive *not* to be "called again" until time for the routine overhauling.

As we see it, the "preventive" feature of maintenance is the natural result of any system of planned and well executed maintenance, including lubrication, whether it be a centralized system or not. We do know that centralized maintenance in our instance has prevented machine breakdowns and the resulting loss of production, just as surely as improved medical facilities and preventive measures have decreased disease.

One indication to us that we are on the way to preventive maintenance is the fact that on some 1200 preparatory machines, from opening through spinning, we do not have oilers on but one shift, though the machines operate three shifts.

In a mill of over 80,000 spindles, our program covers the maintenance and lubrication of all production machines, as well as humidification, air conditioning, and refrigeration units.

Moving and relocating of all machinery is done by maintenance. Whenever the necessity for this type work occurs, whether for purposes pertaining to better flow of material, more efficient operation, reduction of accident hazard, or what have you, the machine is not turned over to the department until it is in production.

Mr. Sayers

Maintenance Personnel

The supervising personnel consists of the following:

One supervisor for all overhauling, heavy maintenance, and oilers from opening through slubbers, slashing, beaming, and cloth room;

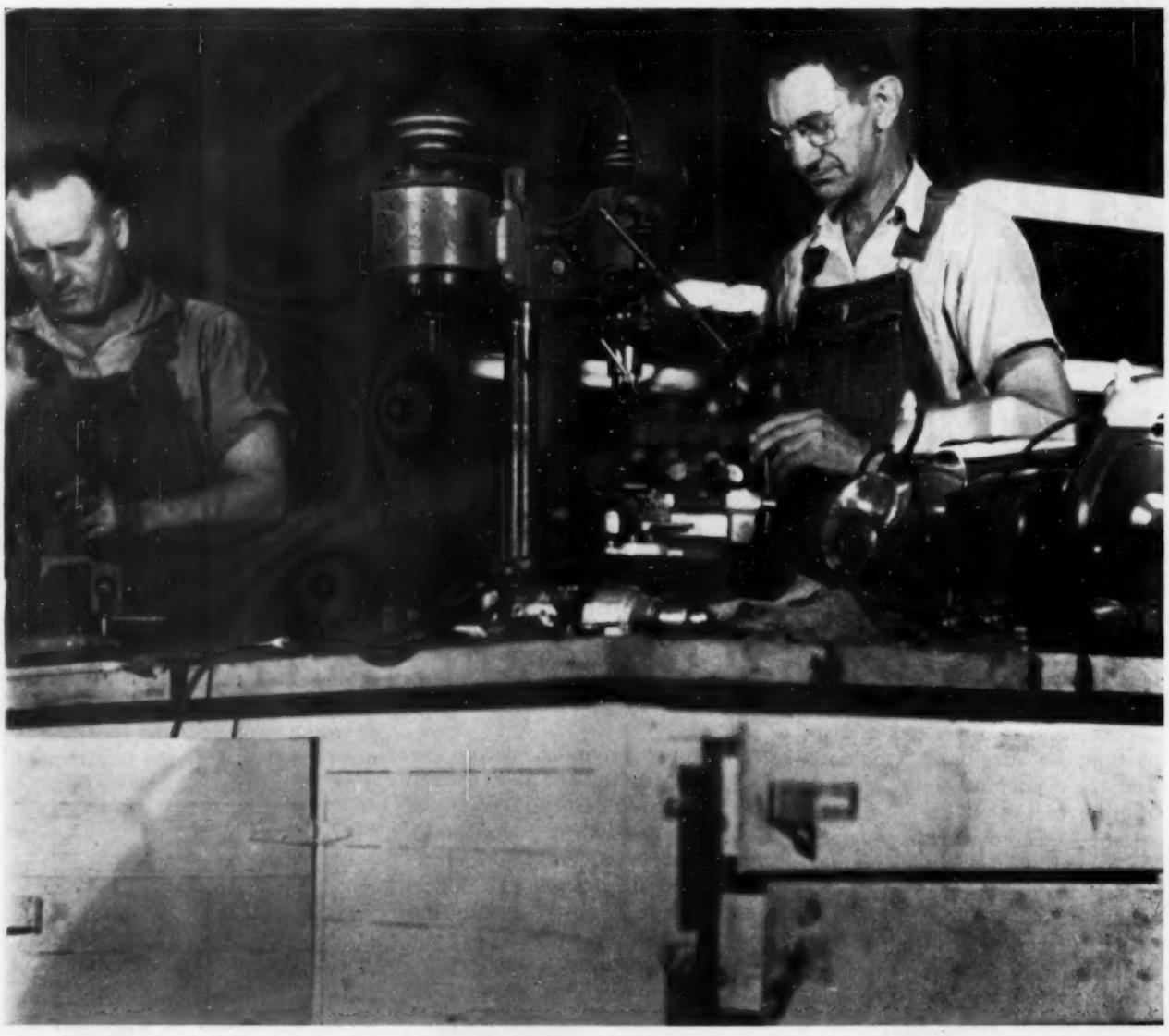
One supervisor for all overhauling, heavy maintenance, and oilers on spinning, twisters, winders, warpers, and quillers;

One supervisor for all loom maintenance;

One supervisor for refrigeration, air conditioning, and humidification.

The supervisors over routine mill overhauling and maintenance have their men divided into groups, and each group is led by a head overhauler, who is responsible for the performance of his group; the group usually consists of from four to five men. The functioning of these groups will be discussed in detail under the specific headings pertaining to their respective lines of work.

We have retained what we refer to as a "skeleton crew" of section



Each crew of overhaulers has a portable work bench equipped with vise, grinder, drill press, and such other tools as electric drills, hydraulic jacks, speed wrench sets, etc. The design of the bench is such that there are three drawers at each end for overhaulers' tools, and a compartment is provided in the center (door at left) for special tools.

men under the supervision of the various departments to take care of minor repair jobs and flags. The size of these sections is determined by the maintenance superintendent, based upon extended time studies by the technical department.

Regardless of the size of these jobs, ample unoccupied time is allowed at designated periods during the shift, at which times the men may rest, eat lunch, smoke, or do whatever they wish.

Although there is rarely a major breakdown, in the event that there is, Maintenance is called to make repairs. The section men are not required to do such work as cylinder repairs, bearing replacements, steel roll work, and jobs of this nature.

We have not found it necessary to retain a crew on the second and third shifts to take care of special jobs. However, should an emergency arise due to a major breakdown, Maintenance is called at any time.

Machine Modernization, Improvement and Standardization

With the approval and assistance of our top management, we endeavor to keep all machines modernized with the latest improvements that we consider practical. This program of modernization is also used as a means of standardization of various parts and mechanisms in so far as it is possible.

To illustrate, if we have a group of spinning frames of old model with lifter rods in need of replacement, the replacement is made with lifter rods and bushings similar to the newest model frames we have, and of the standard diameter with which all frames will be equipped as the need arises.

Through this process of standardization we have been able to

simplify practically all machine constants. For example, on various models of cards having different doffer diameters, we have one production constant, and all cards run identical production gears. Every spinning frame has the same twist constant, as does every twister. All spinning frames running the same range of yarn numbers carry the same draft constant.

Another illustration of standardization is the fact that we have but one size cylinder pinion in the entire mill, number of teeth and bore being the same for every frame.

Obviously, the standardizing of such supplies enables us to stock extra parts in a minimum amount of space and necessitates a minimum of data recording.

Eliminating Weak Points

Relative to machine improvements, we are fortunate in having in our department a young mechanic with several years of machine shop experience, both as mechanic and as machine shop supervisor. Over a period of time, from observation and accumulated records, we have been able to determine many weak points that were difficult to "keep fixed." With the aid of this mechanic we have succeeded in many instances in redesigning, or otherwise improving, the mechanism involved to the extent that it is no longer a maintenance nuisance. Having a man with extensive practical machine shop experience has also enabled us to attain satisfactory coordination of the two departments.

Application of machine shop technique on the job has also resulted in many of our overhaulers developing the mechanic's attitude in addition to that of the fixer. That is, they are just as insistent that the parts they are applying are accurately and correctly made, as they are that they fit the machine for which they are intended.

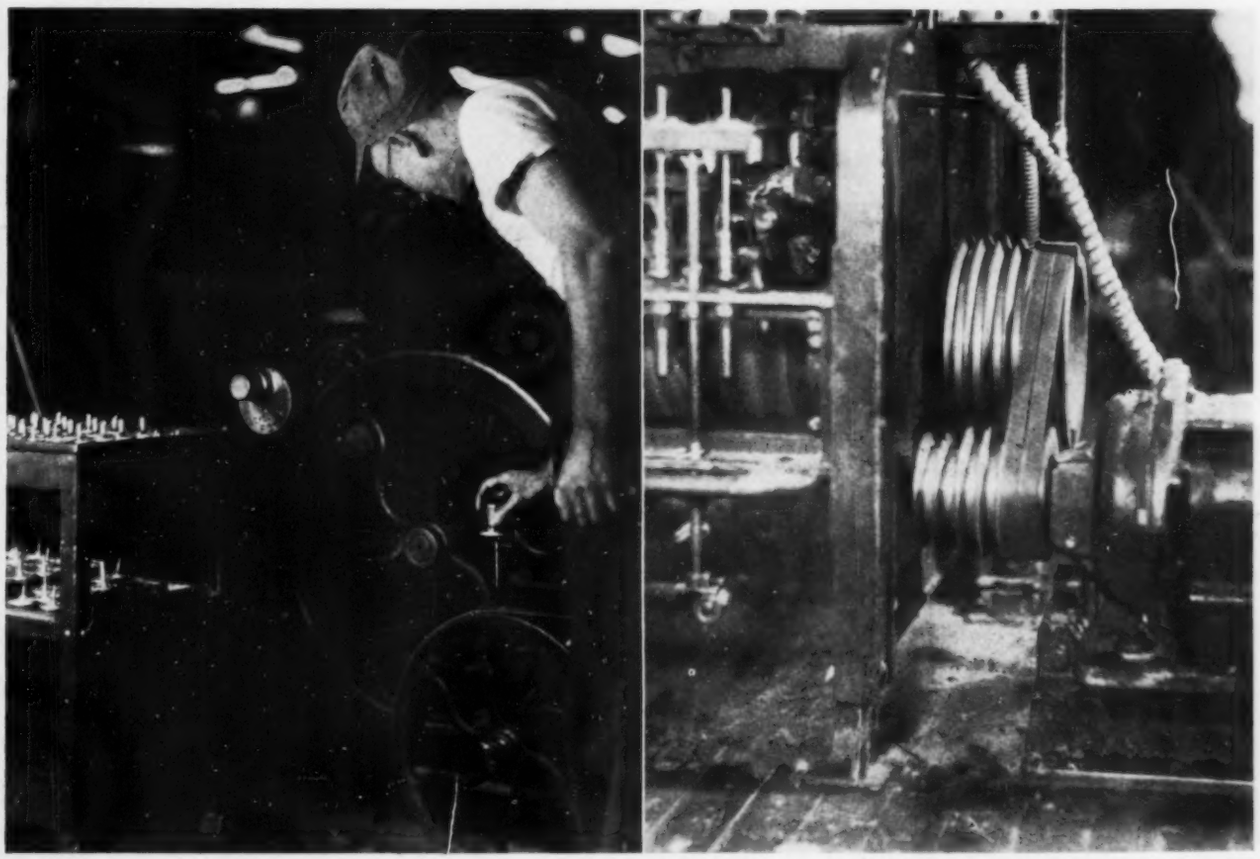
Supplies

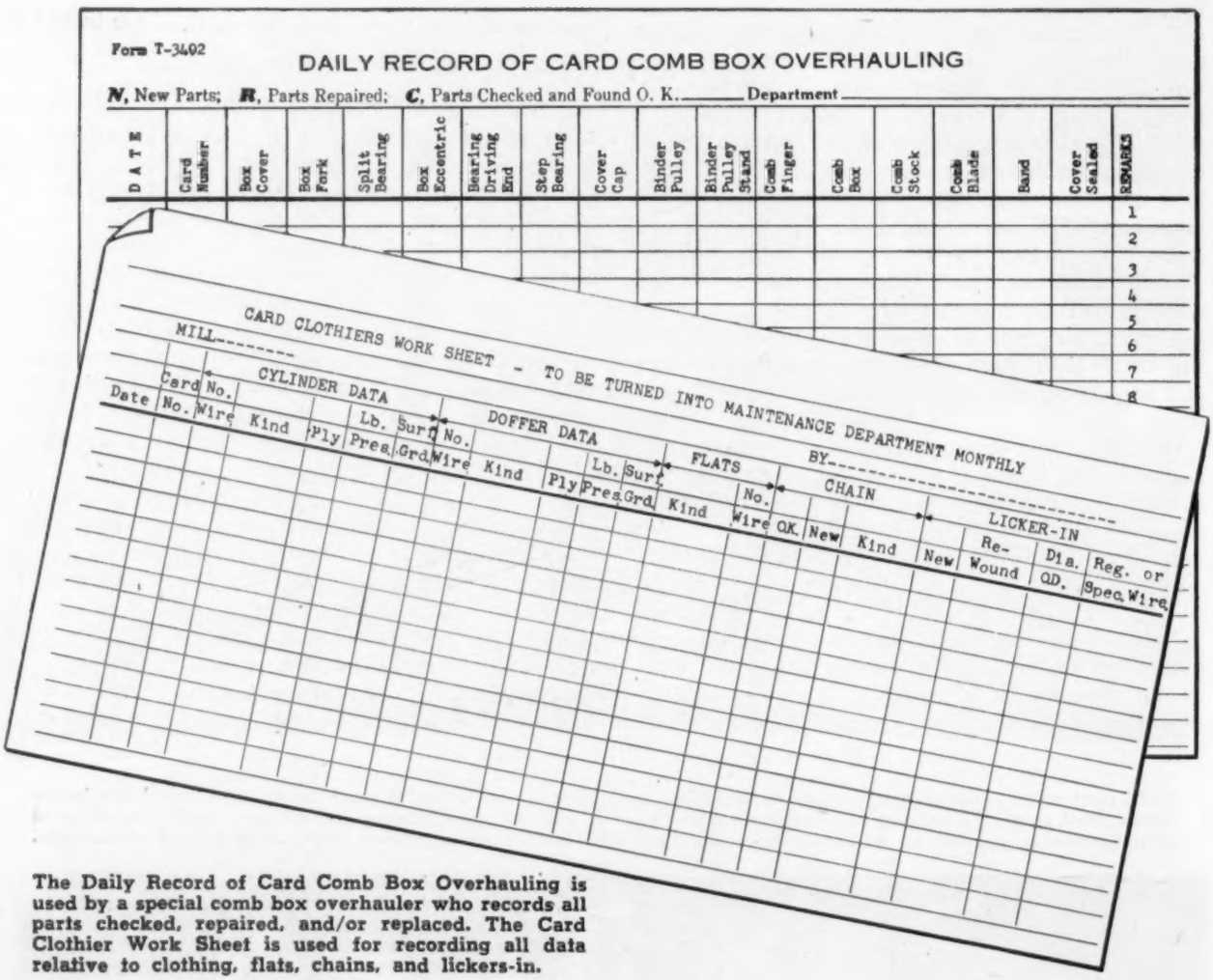
Supply problems have been decreased, due in large part to a concentrated effort to give the machine builders and other suppliers correct specifications, machine data, and related information to enable them to properly interpret our needs. Naturally our efforts toward standardization have also simplified the supply problem.

Loom supplies and routine mill supplies such as belting, brooms, oils, greases, travelers, and many others are bought and issued through a main supply room.

In addition to this supply room, we have a maintenance stock room. Practically all repair parts for opening through spinning are stocked in this room. These supplies are requisitioned by the Maintenance department, subject to the approval of the purchasing

Left, card room oiler exchanges bottle oiler. Note stock cart at left which is used for transporting extra bottle oilers. Bottles are exchanged and empties carried back to oil tank for cleaning and refilling. Right, three-speed step sheave as applied on filling twister. Matching of V-belts is accomplished in the maintenance stock room.





Form T-3402

DAILY RECORD OF CARD COMB BOX OVERHAULING

N, New Parts; *R*, Parts Repaired; *C*, Parts Checked and Found O. K. Department

DATE	Card Number	Box Cover	Box Fork	Split Bearing	Box Eccentric	Bearing Driving End	Step Bearing	Cover Cap	Binder Pulley	Binder Pulley Stand	Comb Finger	Comb Box	Comb Stock	Comb Blade	Band	Cover Sealed	REMARKS
																	1
																	2
																	3
																	4
																	5
																	6
																	7
																	8

CARD CLOTHIERS WORK SHEET - TO BE TURNED INTO MAINTENANCE DEPARTMENT MONTHLY

MILL_____ BY_____

Date	CYLINDER DATA: Card No.	No.	Wire	Kind	Ply	Lb. Pres.	Surf Grd	DOFFER DATA: No.	Wire	Kind	Ply	Lb. Pres.	Surf Grd	FLATS: No.	Wire	Kind	CHAIN: O.K.	New	Kind	LICKER-IN: New	Re-Wound	Dia. O.D.	Reg. or Spec. Wire

The Daily Record of Card Comb Box Overhauling is used by a special comb box overhauler who records all parts checked, repaired, and/or replaced. The Card Clothier Work Sheet is used for recording all data relative to clothing, flats, chains, and lickers-in.

agent. All supplies kept in this room are available to the Maintenance department as needed without a requisition. A supply clerk is retained who issues supplies just as in the regular supply room.

Belt Matching

In this maintenance stock room we also carry on such work as belt matching, polishing saddles before application, painting casted parts, drilling and tapping of stock parts for centralized oil system fittings, and minor grinding and drilling operations.

For the accurate matching of V-belts, we use a regular matching machine designed for that purpose. When one belt in a set fails, they are all removed and either a new set or a set of matched used belts is applied. All old belts are returned to this room, and those not sufficiently worn to the extent that they need to be discarded are matched and tied in bundles of certain length tolerance. This tolerance is determined by the original length and the size of the belts. These matched usable belts are then reissued for further use.

Lubrication

The development of a successful maintenance program without an accompanying efficient lubrication program would be impossible. Consequently, as we have taken over maintenance in a department we have also taken over lubrication, including the training and supervision of the oilers. This program also includes the selection of the proper oils and greases to use, the application of centralized lubrication systems, thermal and constant level bottle oilers, and written schedules, based on time and method studies.

Our records indicate that due to improved lubrication, the number of worn parts have been considerably decreased. In addition, oil consumption has been reduced by approximately 50%, and the labor used for applying lubricants by more than 50%.

The oilers work by written schedules, which have been developed by the technical department. These schedules show the kind of lubricant to use, where and what to oil, as well as the time of day to oil specific parts. Tanks for different types of oil such as spindle, roll, and general purpose are painted in different colors, and the name of the oil is stenciled on each tank.

A few specific instances of im-

proved lubrication methods as they have been applied on various machines will be pointed out as the machines are discussed.

Opening and Picking

The group of overhaulers which does work in opening and picking is led by a head overhauler. The men do all overhauling and heavy maintenance on opening, picking, waste machines, beamers, slashers, and cloth room equipment.

Opening and picking is thoroughly overhauled about every four months. Naturally, when the machines are gone into this often there is little need for parts replacements. However, we go into them, inspect all parts, and make necessary replacements and adjustments. All ball bearings are inspected, thoroughly cleaned and re-lubricated as needed. Practically all bearings that are not equipped with ball bearings are equipped with thermal type unbreakable bottle oilers. Such mechanisms as speed reducers on return air condensers are equipped with unbreakable constant level oilers.

Although we shall list a few of the specific jobs done, we shall explain the overhauling procedure in a general way by merely stating that every machine we check and overhaul we endeavor, and from our experience to date, are successful, in leaving the machine in such mechanical condition that it will operate trouble free until we come back on the next round.

All aprons are adjusted, repaired or replaced as necessary, chokes removed, good belting left on the machines, settings checked, and adjusting mechanisms left secure.

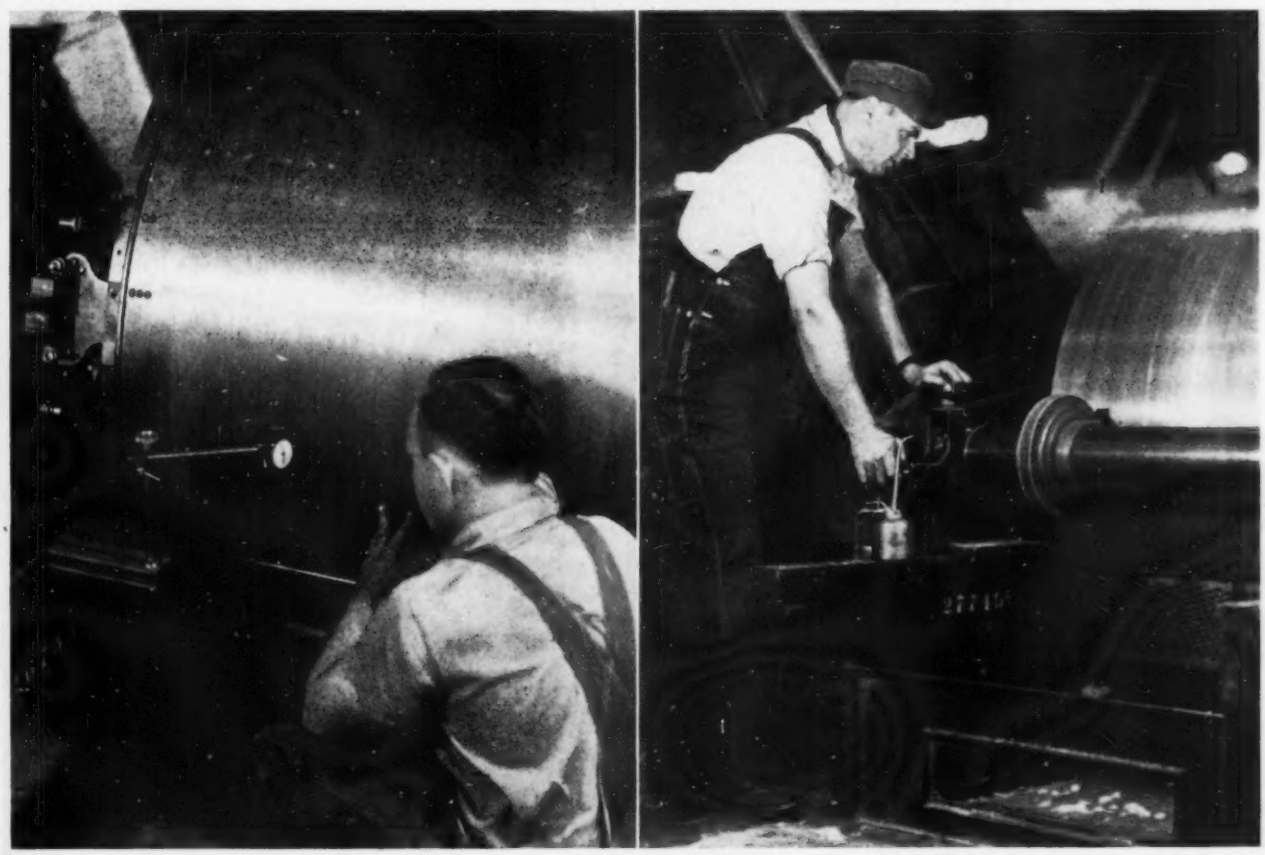
Picker eveners are completely dismantled, thoroughly cleaned, reassembled, and left in as nearly perfect condition as our "know how" permits, on every round. Beaters, grid bars, and screens are inspected, repaired, or replaced as necessary; also all excessively worn gears, shafting, and studs.

We consider efficient daily cleaning of all opening and picking equipment essential to preventive maintenance. Routine machine cleaning is under the department heads. The jobs are performed in accord with written time schedules as studied by the time study men and are performed under their observation, even to the extent of training men, for and on the jobs, until all concerned approve the schedules and are satisfied with the results.

Every picker is stopped once every twenty-four hours of operation and given a thorough cleaning with waste and compressed air. With no stock in the machine, all beater and screen sections are opened, thoroughly cleaned, and chokes removed during this cleaning.

Each crew of overhaulers has a portable work bench equipped with vise, grinder, drill press, and such other tools as ½" and ¼"

Left, a surface indicator is placed on a naked card cylinder to determine whether the cylinder should be surface ground. Right, view of surface grinder in operation. This type of work is done by Maintenance personnel.



electric drills, hydraulic jacks, speed wrench sets, angular drills, and other special tools as needed to improve the efficiency of the various jobs encountered.

Card Overhauling

All card grinding, clothing, licker-in work, flats, chains, continuous strippers, comb box maintenance, and lubrication is done by Maintenance. We consider the grinding operation as incomplete unless all excessively worn parts have been replaced, good belting and bands left on the cards, and every part of the machine left in satisfactory condition to operate without interruption until the next grinding.

All cylinder bearings are checked periodically with feeler gauges. Those out of tolerance are rebushed with oil impregnated inserts.

All feed rolls are kept to standard diameter at bearing point by metallizing. All bearings are fitted with standard bore inserts as needed; comb stocks are maintained in the same manner.

Reclothing a card with a motor-driven clothing machine.

Thermal bottle oilers are used on all cylinder and doffer bearings, and constant level oilers are on all comb boxes. By the utilization of such devices, plus the application of numerous grease fittings and internal stud lubrication, we have succeeded in reducing the man-hours required for card lubrication by about 75%, over a period of three or four years.

Such items as scavenger rolls, Thompson rolls, and clearers are maintained as a part of the regular routine.

Periodic surveys of cylinder and doffer fillets, flats, and chains are made by card maintenance men. A sufficient number of replacements are kept in the maintenance stock room along with all other card supplies.

Forms are used for recording data relative to comb box overhauling, card clothing, chains, etc.

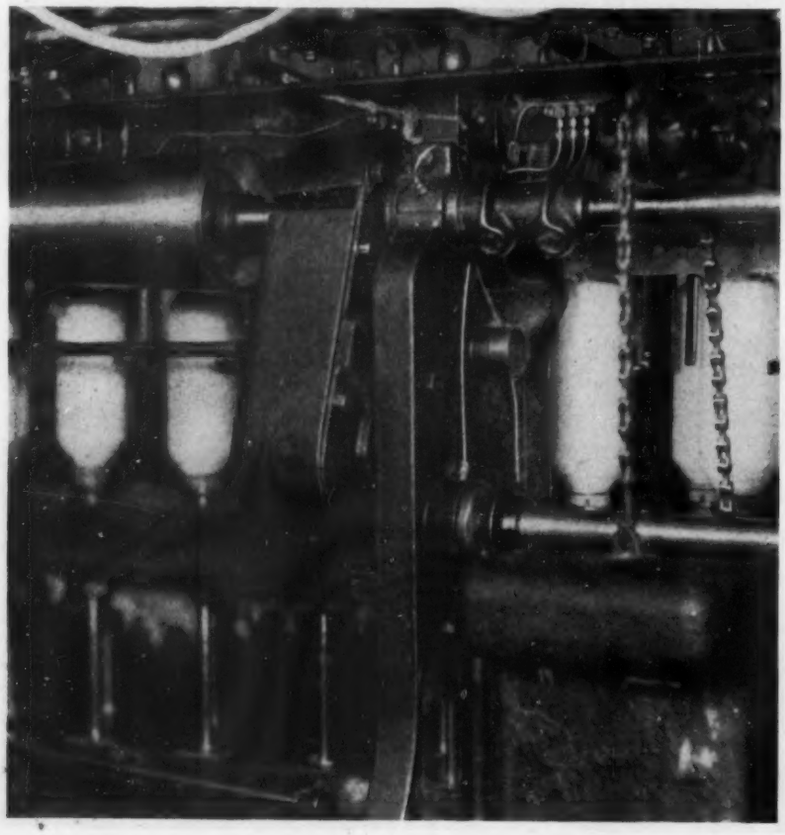
For the purpose of ascertaining the extent to which we are successful in maintaining quality carding, we are constantly making nep counts, the results of which are recorded for comparative analysis.

Special equipment, including motorized clothing machine, cylinder surface indicators, and surface grinders, are utilized.

A "skeleton crew," as previously mentioned, is retained by the carding departments to take care of minor breakdowns that occur and to perform such other duties as coiler head cleaning, belt cleaning, and dressing.

All overhauling and heavy maintenance of drawing, slubbers, and mop machines are done by one crew of overhaulers led by a head overhauler.

All slubbers are equipped with centralized lubrication systems. Shown here is the system as applied to twist gearing on a slubber.



Drawing Frames

Drawing is completely overhauled, aligned, and leveled once each year. In addition, once during the year the frames are gone over and given a thorough cleaning. Inspection, necessary adjustments, and minor repairs are made then. Steel rolls are removed and scrubbed every two weeks, at which time the turn tables are thoroughly cleaned and oiled, all roll settings checked for set, and stands tightened if needed.

Line shaft bearings and front roll end bearings are equipped with thermal bottle oilers.

We find such installations as

roller bearing hi-compression calender rolls a boon to the maintenance program, as well as a means to increased efficiency of drawing and slubbers.

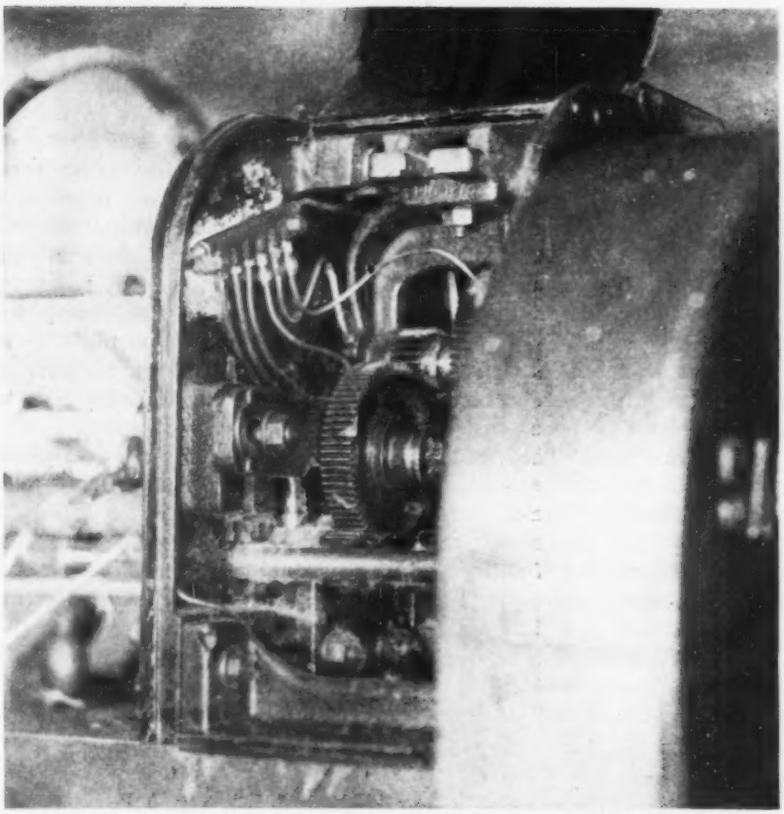
Slubbers

Slubber overhauling consists of dismantling of rolls, flyers, spindles, and bobbin gears. The frames are carefully aligned and leveled with patented aligning and leveling equipment.

Every part of the frame is cleaned, including such parts as steel rolls, bolsters, bearings, and gears. Excessively worn parts are repaired or replaced as necessary. Flyers are balanced and repaired as well as our equipment for doing this type work will permit. Those that cannot be repaired at the mill are sent off to be repaired or replaced as the condition demands.

This overhauling is done not less than once each year on frames operating three shifts.

Bolster rail casing stand replacements have been considerably reduced by the installation of truck guard rails.



View of draft gearing on slubber. Note centralized lubrication system.

Slubber Lubrication

All slubbers are equipped with centralized lubrication systems which service all parts requiring lubrication; exceptions to this are top rolls, spindle steps, bolsters, bobbin gears, and the internal compound. Each frame is equipped with two lubricators, each servicing about thirty bearings.

General manual lubrication, done by a maintenance oiler, includes all top rolls except the front shells. These are cleaned and lubricated by special roll cleaners who dismantle, clean, and lubricate the shells and arbors; they do the complete job, including starting up the frame and leaving all ends running.

Reservoir spindle steps are oiled on time schedules without stopping off the frames.

Compounds are lubricated every two months, and only enough oil is added to bring the content up to the amount recommended by the machine builder for the best operating condition, and to prevent waste of oil by over lubricating.

The proper amount of oil to add each time was determined in the following manner: The plug at which point the lubricant is applied was removed from one compound. The compound was completely emptied by turning until the hole was on bottom center. The compound was then turned back until the hole was sufficiently high on the side to hold the amount of oil as recommended, and that amount was put into the compound.

With the plug still removed, the hole was turned downward until oil began to drain out. A permanent mark was then made on the edge of the compound in line with the bottom of the oil hole. Then a line on the same plane was located and marked permanently on the back side of the slubber head end as near the compound as possible. Then a similar point was located and marked on the back of the head end of every slubber, and a permanent line or mark was made in line with the bottom of the oil hole on every compound as described previously.

When adding lubricant we merely turn the compound until these two points or lines are on the same level, remove the plug, and add lubricant until it begins to drain from the oil hole.

Spinning and Twisting

Spinning frames and twisters being similar in so far as their general construction is concerned, they will be discussed as one.

Our cycle of spinning overhauling at present is from eight to twelve months, depending to some degree upon the yarn numbers and shifts run. As we complete some items of modernization we expect to be able to extend the interval between overhaulings considerably.

In this group the head overhauler has a crew consisting of two to three cleaners and helpers (depending upon whether or not there are any special jobs to be done) and one spindle plumber.

All roving is removed from the

creel, and the frame is completely stripped. The top and steel rolls are removed, top rolls are buffed, and the steel rolls scrubbed. All defective aprons are replaced, the procedure being to equip a complete frame with new aprons and use the serviceable old ones as replacements on the succeeding frames until they are used up, and then an additional frame of new ones is required.

Spindle oil is changed and bases are flushed with fresh oil on every second round where cast iron bolsters are used. The head end gearing is completely dismantled for a thorough cleaning, inspection, and for necessary repair and/or replacement of studs, bearings, and gears.

The frames are aligned and leveled with patented aligning and leveling devices. Defective tapes are replaced, tape idlers lubricated as needed, and properly set. Cylinders are repaired or replaced as needed, motor bases leveled, and properly matched belts in full sets are left on each frame.

Ringrail and traversing thread board lifter rods and bearings are cleaned at each overhauling. Cap bars are tightened, defective ones being replaced; top front rolls are squared to steel rolls, worn saddles replaced, weight levers leveled, and roving traverse set. Creels are washed with soap and water.

After the complete overhauling, the frame is turned over to the spindle plumber, who plumbs the spindles, sets thread guides and traveler pins. Maintenance men get up the ends and leave the frame in production.

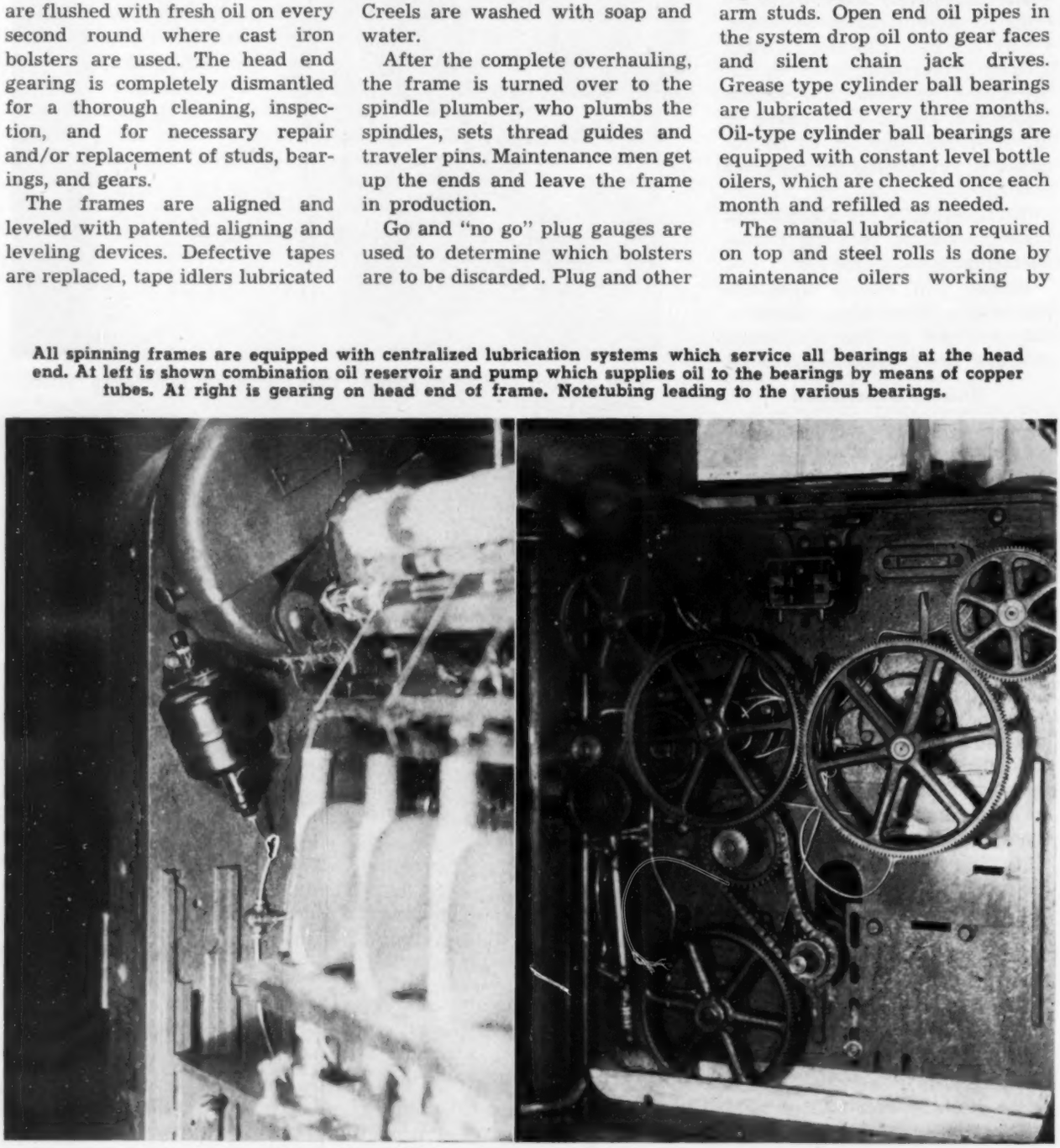
Go and "no go" plug gauges are used to determine which bolsters are to be discarded. Plug and other type sizing gauges are used also in determining the proper diameter of bore and length of bore of various gears, studs, and bearings. Such parts found to be incorrect and not within the standard tolerance are rejected and returned to the machine shop for correction.

Spinning Lubrication

All spinning frames and twisters are equipped with centralized lubrication systems which service all bearings at the head end, including such as cam shaft bearings, crown gear studs, and builder arm studs. Open end oil pipes in the system drop oil onto gear faces and silent chain jack drives. Grease type cylinder ball bearings are lubricated every three months. Oil-type cylinder ball bearings are equipped with constant level bottle oilers, which are checked once each month and refilled as needed.

The manual lubrication required on top and steel rolls is done by maintenance oilers working by

All spinning frames are equipped with centralized lubrication systems which service all bearings at the head end. At left is shown combination oil reservoir and pump which supplies oil to the bearings by means of copper tubes. At right is gearing on head end of frame. Notetubing leading to the various bearings.



Oiling spinning spindles. To save time, a reserve oil tank is connected to the oil cup, eliminating necessity for oiler to refill cup.

time schedules as previously explained.

Specialized Jobs

Such jobs as cylinder work, ball bearing replacement, and steel roll work are done as necessity demands by members of the overhauling crew who have been specially trained and have available such special equipment as hydraulic cylinder spreaders and hydraulic roll presses. These men are not retained just to do special jobs, but spend most of their time doing routine overhauling; they are used for special jobs only as needed, since we often go for days and even weeks without the occurrence of jobs of this type.

All builder work is done by one man on one shift who devotes all of his time to builders. Although the builder proper is overhauled during the routine overhauling, due to yarn changes and the resulting necessity for certain changes in the guild, we find this specialized job to be beneficial.

Warp spinning doffing is done by written schedules which are worked up and posted every twenty-four hours by the technical department for both mills. These schedules are based and written on standard maximum running times for various yarn numbers, rings, and package sizes. Consequently, it is essential that the builder man keep all builders properly regulated as to stroke, pick, and lay in order that every frame will run the standard time, thus avoiding loss of production that would result should the frame not be building a standard package. Warp frames are stopped only by the doffers as they approach the frame at the scheduled time to bear down the rail for doffing.

Winders

General overhauling, aligning, and leveling of winders is done by certain of the spinning overhauling crews who are experienced on both machines. The same general procedure is followed as on other machines inasmuch as all excessively worn parts are replaced, bearings are cleaned and lubricated, and all settings checked and left properly set.

On automatic winders and quillers, all moving units are dismantled, cleaned, inspected, and the necessary parts repaired and replacements made every four months. Wood cones are plug gauged periodically; those worn in excess of the standard maximum bore allowed are discarded. New cones received are similarly checked upon receipt and rejected if not within the tolerance allowed for new cones. As a general rule we adopt as standard tolerances for such items, those recommended by the machine builder.

Slashers

Slashers are overhauled once each year. They are given a general overhauling just as other machines are. Creels and frames are aligned and leveled, worn parts repaired or replaced, rolls repaired, bearings cleaned, inspected, and left with new lubricant. All cylinder bearing housings are equipped with constant level bottle oilers. Hoods are taken down, cleaned, rust proofed, and painted as needed.

Loom Maintenance

At present, due to having a number of surplus looms, overhauling of looms is being done outside the weave room. Our experience with this system to date leads us to hope that we will be able to do the first round of complete reconditioning by this method.

In utilizing this system, several looms are completely overhauled in the warehouse that has been equipped for the job. These looms are then transferred into the weave room, put into production, and an equal number removed to be overhauled.

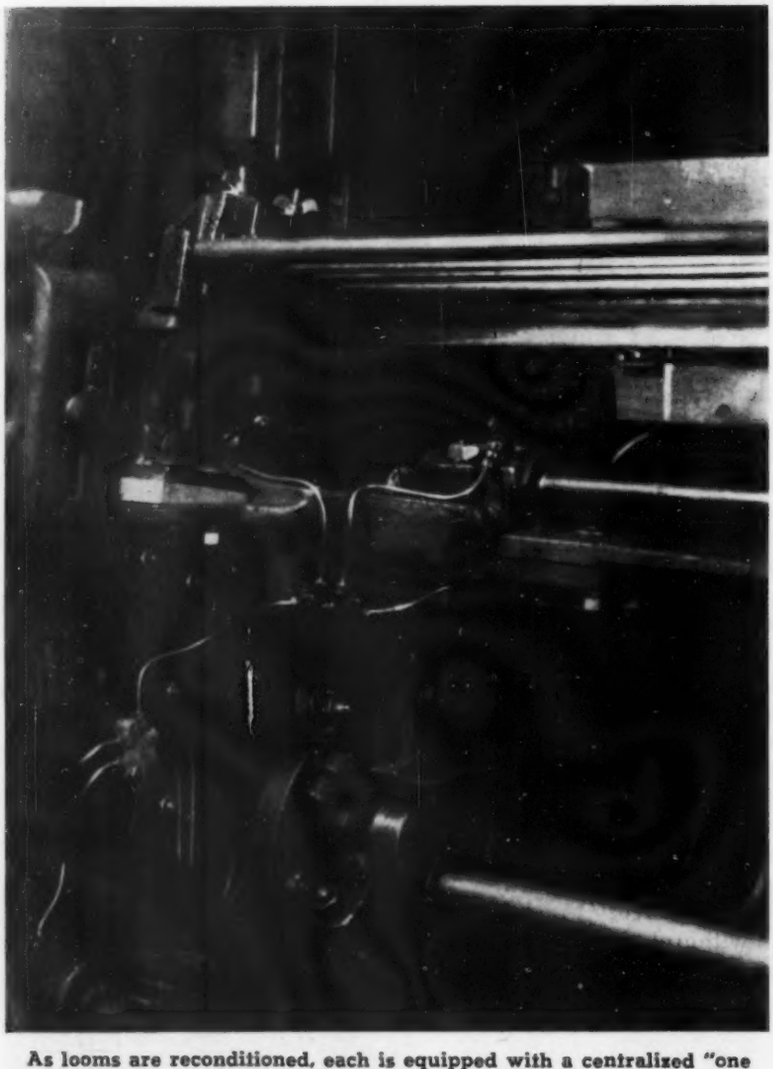
Tools and equipment available for this work include portable work benches with grinder, drill press, vise, and such special additional equipment as portable acetylene welding outfit, portable air compressor, and horizontal hydraulic presses for cam and crank shaft work, as well as the standard gauges, jigs, and fixtures for the various loom settings.

Loom overhauling is done in a warehouse specially equipped for the purpose. Here, a camshaft bearing seat is being built on a loom side in the loom maintenance department.

The looms are completely dismantled and rebuilt from the floor up. Loom sides that have been broken beyond repair are replaced with new ones. Those that are broken or cracked are welded on the spot. Cam and crank shaft bearing seats are built up and filed or ground back to the proper plane.

Breast beams are repaired or replaced as needed; back, front, and cross girts are properly fitted and squared.

Necessary repairs and/or re-



As looms are reconditioned, each is equipped with a centralized "one shot" lubrication system. Shown here is part of the lubrication system as installed on a 40-inch loom.

placements are made on swords, rocker shaft bearings, rocker shafts, and lays. During this procedure the frame has been leveled preparatory to the assembling of the various mechanisms.

All bearings such as cam shaft, crank shaft, auxiliary shaft, and take-up roll are perfectly aligned with special aligning shafts. Excessively worn cam and crank shafts are repaired or replaced as their condition demands.

All mechanisms of the loom having been dismantled, they are carefully rebuilt by men most experienced on each mechanism. All worn parts are replaced with either new or repaired parts. These mechanisms include let-off, take-up, pick motion, parallel motion, and harness motion.

Worn race plates are replaced, lay ends leveled, and box plates aligned. Binders and front box plates are recovered, and good pickers are left on every loom.

Gauges of all types as furnished by the machine builder are utilized in setting all parts to standard.

On old model looms, wherever possible and when supplies will permit, modernized parts and mechanisms common to the newest model looms are applied.

Before a loom is put back into production, it is rocked with shuttle in place and every part is checked for proper performance.

After a warp has been tied in, a member of the maintenance crew stays with each loom, making necessary final adjustments until he has received the overseer's or secondhand's approval, and the loom is left producing.

Loom Lubrication

During the overhauling outlined, men specially trained for the job have been busy applying a centralized, "one shot" lubrication system. Although we are comparatively new in this installation on looms, we are applying the system on all looms being reconditioned. The system lubricates a majority of the bearings, the exceptions being such as treadle rolls, shuttle feeler, battery, pick balls, and one or two slow motion let-off parts. Practically all parts not being serviced by the lubrication system are being equipped with grease fittings.

The one-shot lubrication system services such parts as cam and crank shaft bearings, auxiliary shaft bearings, treadles, main let-off and take-up bearings, pick lever, friction, take-up roll, protector rod, and rocker shaft bearings.

Although on original application we have made a few "boners," we have been able to correct them, and our experience to date leads us to believe that the application of centralized lubrication systems on looms is entirely practical.

Cloth Room Machinery

Due to a number of circumstances, set intervals between overhauling of cloth machines have not been determined conclusively. Overhauling and heavy maintenance is done by the same crew that maintains opening, picking, and slashing machines. Routine cleaning, aligning, leveling, parts replacement, bearing inspection, replacement, and lubrication are among the services rendered. Also, such items as the grinding of ledger and spiral blades are included.

Modern inspecting machines, designed and built by the machine shop, require a minimum of maintenance. Folders are overhauled and leveled periodically.

Realizing that we have in the past been guilty of extreme negligence in the lack of maintenance

Form 295-A

TALLASSEE MILLS

LOOM TAKE-UP WORK SHEET Weaving No._____ Checked By_____

Designate Work Done by Using: N-New; R-Repaired; C-Checked, Adjusted

Date	Loom Number	Take-Up Roll	Take-Up Roll Bearing R.H.	Take-Up Roll Bearing L.H.	Take-Up Roll Gear	Take-Up Shaft Driving Gear	Take-Up Shaft Bearing (Bash)	Take-Up Shaft Gear	Take-Up Shaft	Take-Up Bracket	Take-Up Worm Shaft	Take-Up Worm	Take-Up Shaft Gear Cover	Take-Up Worm Guard	Clutch Pinion	Clutch Pinion Ratchet	Clutch Pinion Gear	Clutch Pinion Gear Bracket	Take-Up Worm Wheel

Date	Loom Number	Take-Up Clutch	Take-Clutch Spring	Take-Up Clutch Lever	Foot Let-Back Treadle	Take-Up Stand	Intermediate Gear	Pick Gear Stud	Pick Gear	Pick Gear	Change Gear Bracket	Slack Pawl (stop)	Slack Pawl (short)	Slack Pawl (long)	Slack Pawl Arm	Take-Up Lever	Take-Up Clutch Lever Link Arm	Take-Up Clutch Lever Link (stop)	Take-Up Clutch Lever Link (Bot.

Form 296-A

TALLASSEE MILLS

LOOM LET-OFF WORK SHEET Weaving No._____ Checked By_____

Designate Work Done by: N-New; R-Repair; C-Checked and/or Adjusted

Date	Loom Number	Let-Off Pinion	Let-Off Pinion Shaft	Controlling Lever Stand	Controlling Lever	Controlling Lever Stud	Whip Roll Vibrator Rod	Pallet Lever	Pallet	Let-Off Friction Cam	Ratchet Wheel	Let-Off Friction Clamp	Let-Off Friction Spring	Controlling Lever Link	Let-Off Friction Dog	Beam Lever Bracket	Beam Lever Shaft	Beam Lever	Link Lever

Date	Loom Number	Pinion Cross Head	Let-Off Guard	Let-Off Outside Bearing Support	Controlling Lever Spring Stand	Let-Off Pinion Shaft Arm	Pinion Shaft Handle	Connecting Rod	Connecting Rod Ball	Driving Arm (Monkey-tail)	Pinion Shaft	Pinion Hub	Let-Off Outside Bearing	Internal Gear	Worm Wheel Shaft Bracket	Vibrator Rod Spring	Preventer Spring Collars	Whip Roll Lever Plug	Whip Roll Lever	Sword Tight

Two records used in connection with loom maintenance.

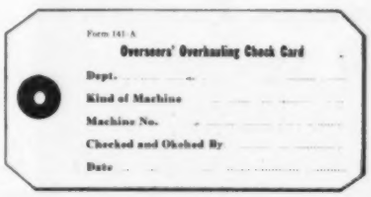
of cloth room machinery, we are constantly striving to improve and expand the maintenance service in this department.

Records of Overhauling

Each crew of overhaulers uses a card known as "Overseers Inspection Card," which is shown in the accompanying illustration. This card provides space for the name of the department, name and mill number of machine being overhauled, date of approval, and name of the inspector.

After completion of the overhauling, but before leaving the machine, the head overhauler is required to get the department overseer or one of his secondhands to thoroughly inspect the machine being overhauled, and to either approve or reject the job at hand. In the event that the overhauling does not justify the approval of the inspector, he does not surrender the card as approved until the machine has been brought up to a condition satisfactory to him.

During the overhauling, all new parts used and special jobs done have been recorded on the back of these cards by the overhaulers. After approval or acceptance, the card is then turned into the maintenance office, and the information required for permanent records is transferred to books kept for the purpose.


Form 141-A

Overseers' Overhauling Check Card

Dept. _____

Kind of Machine _____

Machine No. _____

Checked and Okehed By _____

Date _____

Although we strive to record all necessary pertinent data, we carefully avoid unnecessary detail and the resulting paper work involved.

These cards are kept until the end of each month, when they are used to summarize and write up a general monthly maintenance report. This report covers such information as number of machines overhauled in each department and special jobs done, and serves as a continuous record on progress being made on all major special jobs such as machine modernization programs.

All those constituting mill management, including overseers, get a copy of the report.

Humidification, Refrigeration and Air Conditioning

The Maintenance department does complete maintenance on humidifiers, refrigeration, and air conditioning units. This includes buying and stocking of all supplies for its various activities.

Humidifiers are taken down, carried to the shop, completely dismantled, overhauled, and repainted on routine schedule just as any other machine. Electric water coolers are maintained in the same manner. Such other refrigeration units as office conditioning, drink boxes, store, and hospital units are included and are kept in A-1 condition by rou-

tine inspection and periodic overhaulings.

Air conditioning installations come under this department too.

The service rendered by the Maintenance department has developed to the extent that it is no longer necessary that department supervisors move or attempt to regulate any controls. As a matter of fact, they are positively instructed not to do so, but to report any irregularities in room conditions to the maintenance department. They do keep constant check on their respective room conditions by observing at short intervals constant relative humidity and temperature indicators, one of which is located at every control.

In this department, which has its own shop and necessary equipment, we do all repair work on the various types of lubricating equipment, such as grease guns (both power and manually operated), oil cups, and loader guns.

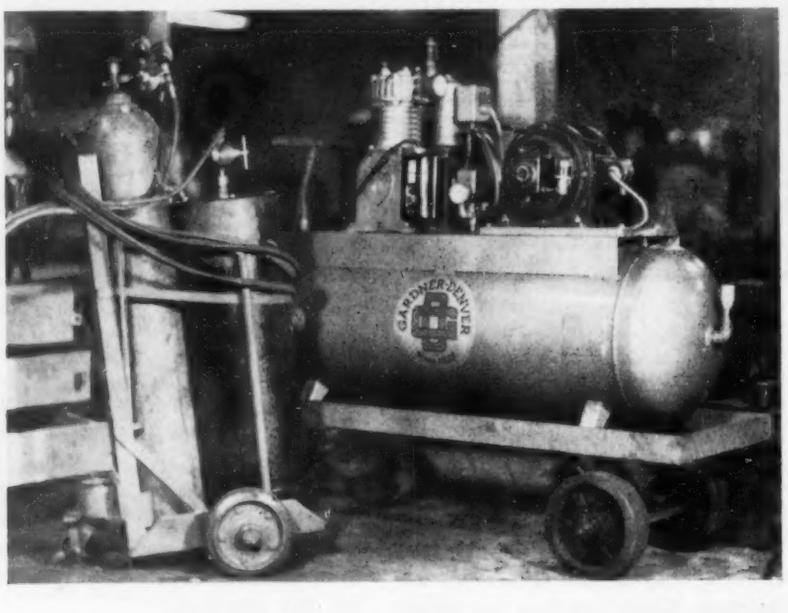
Men Behind the Wrenches

The system was visualized and conceived by top management. The results in large part are due to the outstanding efforts of the supervisors and the men behind the wrenches. Due to their willingness to follow instructions, and knowing the evident resulting advantage of a job well done in preference to poor workmanship done in undue haste, the maintenance jobs are performed in a highly satisfactory manner.

In other words, our overall objective might be stated as, "A program sufficiently effective that we will be able to work on any machine when we *want* to, instead of when we *have* to."

At right, portable air compressor and acetylene welding outfit, as used in loom overhauling.

Below, water cooler being reconditioned in refrigeration and humidification maintenance department.



Textile Workers' Savings, Purchases Above National Average

Textile workers, whose average hourly earnings have advanced more rapidly than in any leading American industry, have increased their savings and purchases far above the national averages, figures compiled by the Textile Information Service indicate.

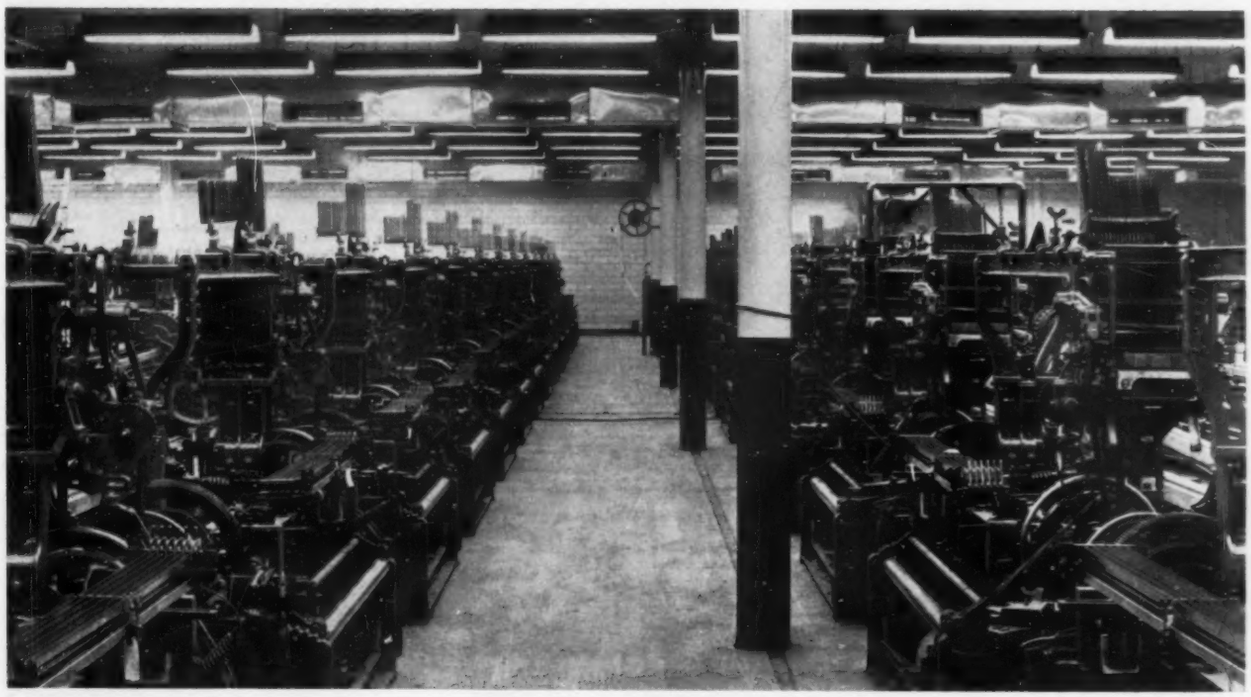
As reported by the U. S. Bureau of Labor Statistics, average hourly earnings in textile manufacturing have increased twice as fast as the rise in the cost of living and by 14 per cent more than in the lumber and timber basic products industry, where the second largest rate of increase among 20 leading American industries was recorded.

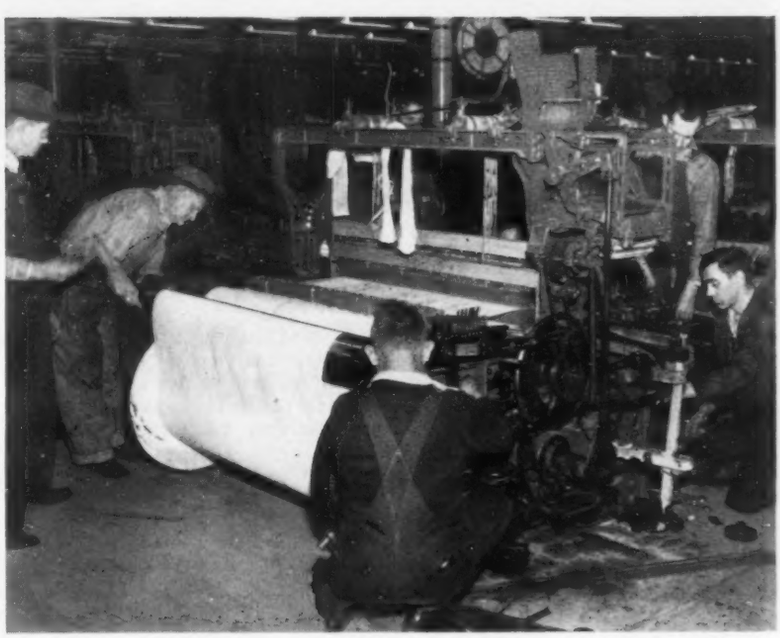
According to the Bureau's figures, average hourly earnings in the textile mill products industry advanced 129 per cent from September, 1939, to September of 1947, while the cost of living rose 62.9 per cent during the same period.

Two typical textile counties in North Carolina—Alamance and Gaston — were selected for the study because the majority of workers in both are employed in textile mills. In Alamance, 71.3 per cent of all gainfully employed persons work in the mills and in Gaston 81.9 per cent of all gainfully employed are textile workers. In these counties, the study disclosed gains in such key statistics as motor vehicle registrations, retail sales, building and loan assets and bank resources, at a rate considerably more than that for the nation as a whole.

Because of the great preponderance of textile workers in both counties, the heavy increase in savings and purchases there are credited almost entirely to the increased wages paid by the textile mills.

Revolution's New Rayon Plant





PHOTOS on this page show views in the weave room of the new Revolution Rayon Plant, Greensboro, N. C., a recent addition to the Cone organization. The rayon mill, located near Revolution Cotton Mills, covers approximately 140,000 square feet, and is of fireproof construction. It was designed along modern architectural lines .

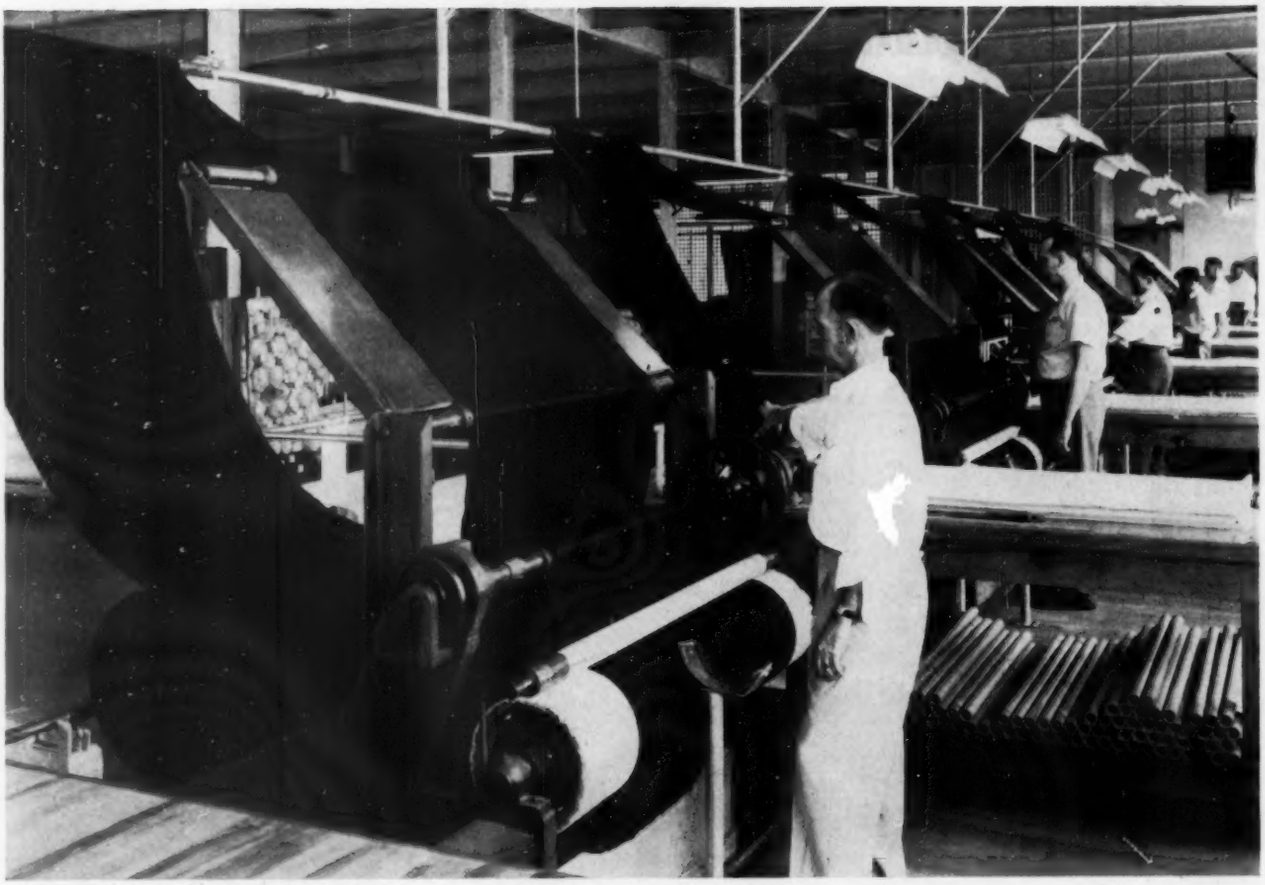
Equipment for the plant consists of 360 dobby looms, of which 150 are box looms, slashing, warping, throwing, quilling, and twisting machinery. Synthetic filament and spun yarns will be woven, with the spun yarn being supplied by the mill at Randleman, purchased by Cone interests last August.

The plant has fluorescent lighting and air conditioning for winter and summer, with practically complete humidity control. Inside walls are lined with structural glazed tile. Outside walls are brick insulated with foam glass. The main floor is maple, reinforced by structural steel, 5-inch thick yellow pine, and an inch thick intermediate flooring.

The building has no windows. Basement is under about three-fourths of the building, in which are housed the special V-frames for receiving woven cloth direct from the loom, permitting inspection and larger loom rolls.

Men's and women's outerwear fabrics will be manufactured in the plant.

J. E. Sirrine & Co., Greenville, S. C., were consulting engineers for the new plant, and C. M. Guest & Sons, Greensboro, were the general contractors.



Rolling machines, in well lighted locations, provide for careful inspection and putting up.

Riegel's Rayon Finishing Plant

A LEADER in the trend of modernization within this great industry, Riegel Textile Corporation has expanded its operations at Ware Shoals to include a new, modern, and efficient rayon finishing plant. Building construction, lighting, air conditioning, and finishing machinery are of the latest design.

AT ITS SITE in Ware Shoals, South Carolina, Riegel Textile Corporation has built a modern and efficient rayon finishing plant. With some equipment still to be installed, this new plant is presently operating below its ultimate capacity. Meanwhile production experience so necessary to the development of quantity output with high quality is being acquired.

About two years ago the Riegel management became interested in the possibilities offered by rayon to expand and diversify finishing and other operations at Ware Shoals. A thorough investigation was made of problems that might be involved in paralleling cotton goods production with rayon lines.

Several pieces of the latest type of rayon finishing equipment were installed for the processing of rayon on a small scale.

After this sampling, facilities for spinning and weaving were checked. New looms for weaving rayon and other auxiliary equipment were ordered. In turn, construction of the rayon finishing plant was undertaken in order to rehouse the equipment used in the initial runs and to accommodate the new equipment ordered for finishing.

The new rayon finishing plant went into operation in January, 1947. Production was limited, of course. But that month marked a significant step for Riegel Textile in the diversification of its facilities at Ware Shoals.

Additional equipment is still being installed in the rayon finishing plant. During 1947, however, facilities increased to the point where Riegel is now a full-fledged producer and finisher of rayon textiles.

Riegel's plant at Ware Shoals is a continuing memorial to the foresight of the Company's founder, the late Benjamin D. Riegel. In 1905 Mr. Riegel became interested in the Ware Shoals Manufacturing Company, a fledgling concern in the process of building a cotton textile mill on the banks of the Saluda River between Greenville and Greenwood, South Carolina. The mill started operations in 1906 and since that time has expanded to several times its original size.

In 1946, five years after the death of Mr. Riegel, Ware Shoals Manufacturing Company and its sister concern, The Trion Company of Trion, Georgia, together with the selling agency for both companies were combined into Riegel Textile Corporation.

The Building

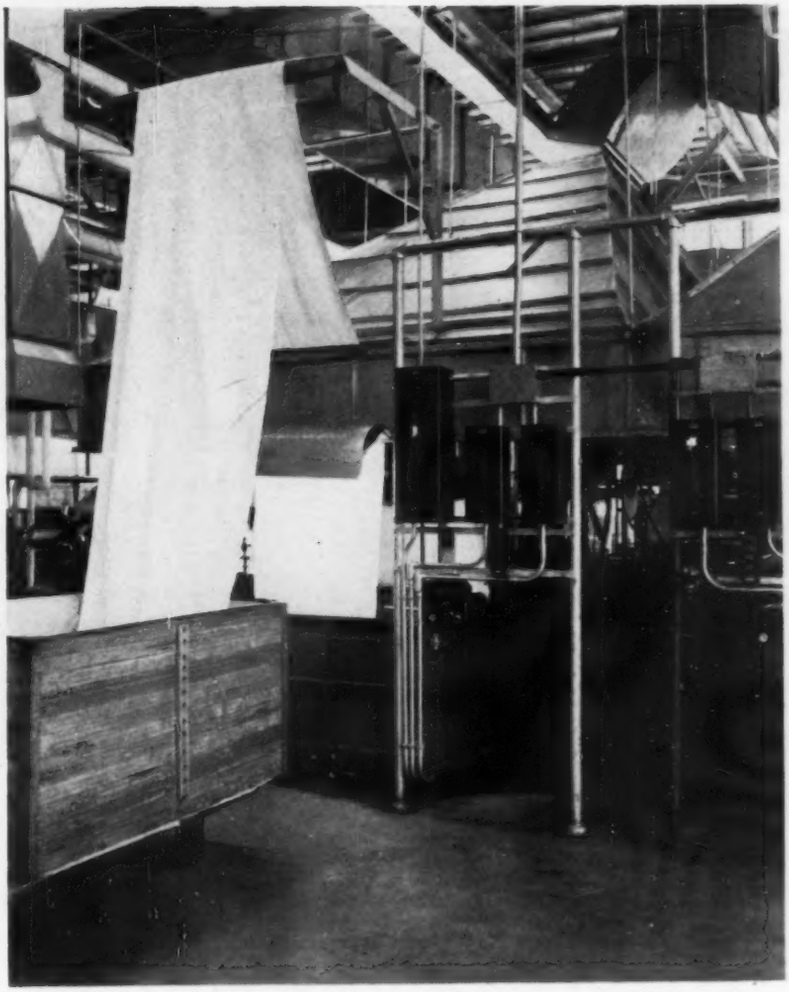
The rayon finishing plant is housed in an impressive building constructed of steel, brick, glass brick, and lined with tile. It has a floor area of approximately 35,000 square feet.

The profusion of glass brick affords excellent lighting in daytime and minimum variations in temperature from changing outdoor climatic conditions. Heat is a major factor to consider in using glass brick. In the winter heat is an element of cost, and in the summer it is an element of physical comfort. The glass bricks used in the new plant are of a type and in numbers that provide the best balance between light efficiency and heat economy.

Interior lighting is provided by overhead lamps which can be regulated as to intensity for daylight or night operations.

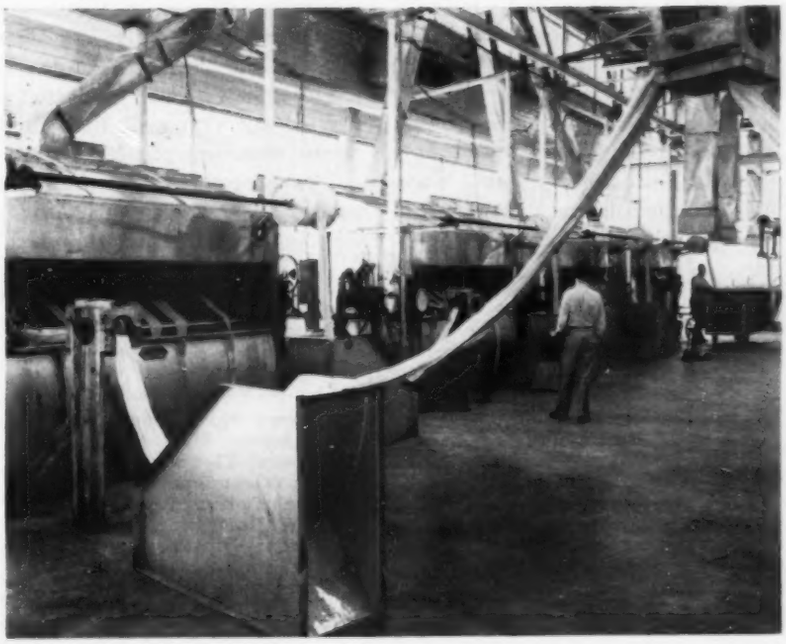
The inside of the plant is lined throughout with glazed tile. Tile is easy to clean and keep clean. It also diffuses light. High ceilings contribute to the comfort of employees by taking steam, fumes, and heat upward from the floor.

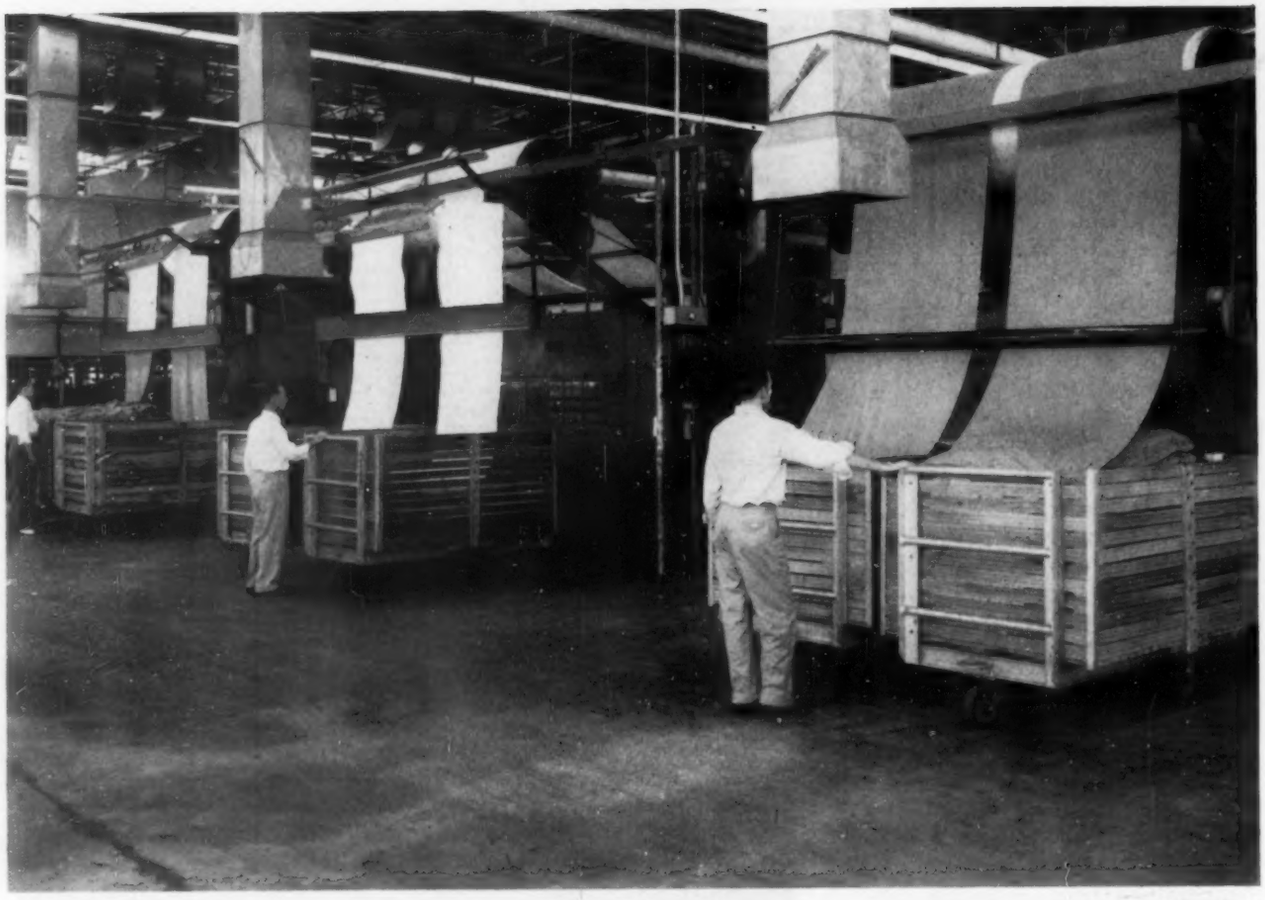
The plant is air conditioned to provide good working atmosphere for employees and a constant climate for fabrics. A spot cooling system is also used widely in the plant. Cool air filters over the position occupied by the operator of a machine.



Above, one of the boil-off machines in the new rayon finishing plant.

Below, a battery of four stainless steel rope-type soapers.





View of delivery end of three loop dryers. Air supply ducts bring cool air to operators. Note air changing units.

Testing equipment for spot checking efficiency of the various processes is located in the plant convenient to all equipment. In addition, tests are made by Riegel's control laboratory for the cotton and rayon finishing plants. There is also the new and modern Riegel Development Laboratories, Inc., at Ware Shoals.

Rayon production at Ware Shoals is rigidly controlled. Laboratory tests prove the efficiency of consistent automatic controls. Instruments govern temperature, water flow, speed, steam flow, pressure, and other factors in the operation. The only factor more important than automatic operation is the human factor. Employees are especially selected and trained for responsibilities in the rayon finishing plant.

The process of rayon finishing used at Ware Shoals involves singeing and desizing followed by boiling off, shrinking and various soaping, washing and drying operations. Stabilization, shrinkage control, crease resistance and other treatments, such as the various resin finishes and Sanforset, are included in the finishing operation.

Continuous Flow of Goods

The layout of machinery is such that the flow of goods through the plant is continuous.

The heart of the operation is the vat dyeing procedure. The fabric is vat dyed on continuous dye ranges, which are assemblies of the latest equipment. The ranges are supplemented by the latest type dye jigs and by dye becks used for certain limited classes of colors. Fabrics are dried in several types of dryers. They are then carried to the put-up department for inspection and packing.

List of Principal Suppliers

Dye Becks and Rope-type Soapers	Rodney Hunt Machine Co.
Boil-off Machines	Hinnekins Machine Co.
Control Board	General Electric Co.
Dye Jigs	Van Vlaanderen Machine Co.
Loop and Roll Dryers	Proctor and Schwartz, Inc.
Padders	H. W. Butterworth & Sons Co.
Steamer	Dupont - Butterworth
Tenter Frames and Williams Units	Morrison Machine Co.
Tenter Dryers	Andrews & Goodrich, Inc.

System for Maintaining
Quality Control

By ERWIN HARD

Detailed explanation of a system for promptly spotting and correcting defective production.

THESE DAYS of increased demands for better quality products require that everyone put forth his best efforts in that direction. Labor, supplies, and material costs are high, and the price to the customer is correspondingly higher today than ever before. For this reason customers want, and have the right to expect, something for their money.

It isn't enough to be watchful or careful to see that this is accomplished—we must have a thorough, practical system for "putting our finger" on the spot where the imperfections occur and correcting these irregularities promptly and adequately.

Cloth Room

To set up a method for quality control, it seems advisable to start with the final cloth inspection and work back through the preceding processes.

Our inspectors make a daily report (Fig. 1) which gives a detailed record of each piece of fabric inspected. It will be noted that this report includes the following information: inspector's name, stamp, loom number, style, yards, and a complete break-down of the causes of seconds. These causes are sub-divided into filling seconds, warp seconds, and mechanical seconds (or those due to faulty loom operation). Space is provided to cover first and second shift operations.

One copy of this report is sent to the office of the weave room supervisor and another to the superintendent's office each day for compilation of records and study, to the end that quality may be improved.

We call the form shown in Fig. 2 our "trouble shooter" ticket. If the inspector should find imperfect cloth which is due to faulty loom operation, she fills out this ticket and places a check mark in the space opposite the cause of the defect. The cloth boy carries this ticket directly to the weaver. The loom is flagged and is not operated again until the cause for the imperfection has been remedied.

The weaver then signs the ticket and gives it to the fixer. He checks the loom to see that it is producing good cloth and then signs it and turns it in to the weave room office. Here, it is checked with the corresponding daily inspector's report and filed away. We rely upon this ticket to a great extent for maintaining quality pro-

Fig. 1. A report of this type provides a detailed daily record of each piece of fabric inspected.

INSPECTOR_____ INSPECTOR'S STAMP_____

DAILY INSPECTION REPORT

MILL No._____ DATE_____

Loom No.
Style
Yds./Roll

Loom and Style	Shift	FILLING SECONDS						WARP SECONDS						MECHANICAL SECONDS					Total Yards	Total Picks
		Kinky Filling	Jerked Filling	Skip Filling	Broken Filling	Misplck	Slough Filling	Bad Weave	Temple Mark	Reed Mark	Smash	End-Out	Bad Selvage	Thin Places	Thick Places	Oil	Miscellaneous			
	1st																			
	2nd																			
	1st																			
	2nd																			
	1st																			
	2nd																			
	1st																			
	2nd																			
	1st																			
	2nd																			
	1st																			
	2nd																			
	1st																			

NOTICE TO OVERSEER WEAVING MILL No._____

Loom No._____ Fixer_____ Date_____

Is now making imperfect cloth

	Kinky Filling		Bad Weave	
	Slough Filling		Smash	
	Jerked Filling		Temple Marks	
	Skip Filling		Reed Marks	
	Broken Filling		Thin Places	
	Mispick		Thick Places	
	Bad Selvage		Oil	
	End Out			

Fig. 2. The "trouble shooter" ticket.

duction and for the correct mechanical operation of our looms.

Slashing and Tying-In

Fig. 3 shows our warp ticket. This ticket is put on the full loom beam at the slasher. The slasher operator fills out the first four items in the top section of the ticket, giving the style, cuts, date slashed, and operator's name.

When the warp is tied, the tying-in machine operator fills in the next two items in the top part of the ticket—tied by, or drawn by. He also fills in the last stub on the ticket, giving date, style, tied by, drawn by, reeded by, and notes the condition of the harness, reed, and warp. If the lease has not been properly taken by the loom fixer (or warp man), he calls this to the attention of the supervisor.

He then tears off the last stub of the ticket and sends this to the weave room office. The warp record is filed and, in this way, a check is maintained on the tying-in machine operators.

When the warp reaches the loom and defects are noted, they can be traced by referring to the warp serial number and the operator's signature on the warp ticket.

The first three lines of the middle stub of the warp ticket are filled in by the loom fixer (or warp hand), giving the date, loom number, style, and pick gear. He signs his name on the line indicated for this purpose. He tears off the stub and gives it to the head loom fixer.

The head loom fixer examines the loom and checks the mechanical operation, as well as the quality of the cloth being produced. If everything is in good order, he simply signs the stub and turns it in to the weave room office. If he finds anything out of order, he uses the last two lines (or the reverse side of the stub) for notations to this effect. He then proceeds to instruct the fixer as he corrects these conditions. When corrections have been made, he signs the ticket and turns it in to the weave room office as already explained.

The foregoing explanation shows how each operative is tied into the scheme to work for the continuous maintenance of quality at the loom.

Now we turn to the slasher room. This department can have a tremendous effect upon our quality, either for good or bad. We hold the slasher operator responsible for giving the weaver a good warp from which first quality goods can be produced. But what about the condition of the section beams from which these warps are made? We can't expect good weaving warps if these beams have high or low selvages, crossed ends, loose ends, or other defects in them.

No. 9698

THE BLANK COTTON MILLS CO.

Mill No._____

WARP TICKET

Style Cuts

Date Slashed

Slashed By

Tied By

Drawn By

Tied on Loom By

No. 9698

Date Loom No

Style Pick Gear

Loom Fixer

Head Loom Fixer

Settings:

Mechanical Condition of Loom:

(NOTE MECHANICAL CONDITIONS OR FAULTY SETTINGS ON BACK)

No. 9698

Date

Style

Tied By

Drawn By

Reeded By

Condition of Harness_Reed_Warp_____

Fig. 3. Warp ticket.

Warping

The form used by our slasher tenders to record the imperfections found in the course of running each set of section beams is shown in Fig. 4. It will be noted that in our plant there are four Barber-Colman high-speed warpers with one operator on each shift. A space is provided for the warper tender's name and the lines are so arranged that the imperfection may be checked against warper on which it was made. This is especially helpful in detecting a single machine being out of order and causing bad work. And the operator's signature shows us who made the beam.

The slasher tender determines the total number of imperfections in each set, signs his name, and turns the report over to the foreman in spooling and warping department. After the foreman inspects it, it is posted on the wall

in front of the warpers for examination by the warper tenders.

It is interesting to note here that there is quite a bit of rivalry between the warper tenders, each of them striving to maintain the best section beam record. If you have not used this method, try it out; you may be surprised at the quick results in improved warps.

Spooling

We cannot expect the slasher tender to produce good work if it is not delivered to him in good order. Nor can we expect this of the warper tender. Fig. 5 illustrates a form that we use for recording bad cheeses removed from the creel by the warper tender, or those caught by the creeler before being placed in the creel. The bad cheeses are shown to the responsible spooler tenders and then recorded on this form, which remains posted near the spoolers as a constant reminder to the spooler operators to do good work.

The reason for the division of spooler and creeler totals is that the creeler is paid for all the bad cheeses she finds. This record can be made to provide space for records of bad work for about six months, and progress can be noted from week to week.

Spinning and Roving

Spinners receive credit for removing from their creels any imperfect bobbins of roving. Lumps, singlings, doublings, greasy roving, etc., are placed on the end of creel tops and collected at the end of each shift. These are returned to the carding department where they are recorded on the chart shown in Fig. 6.

This record is posted in the card room where frame operators may examine it. Each operator can see the progress he is making in his effort to reduce his imperfects from day to day. It will be noted that this shows the various causes and the daily totals for each cause. This aids the supervisor in concentrating his efforts on elimination of the causes of bad roving.

After recording the bad work, it is separated and parceled out to the operators who made it. They are required to straighten it up and correct the faults. Each operator's work can be easily identified by the color of chalk used to mark the roving just before it was doffed.

It is impossible for the writer to go into all the many details concerning these and other methods of quality control, but many other useful ideas are being employed. Each plant must, to a great extent, work out the plan which is best adaptable to local conditions and the product manufactured.

IMPERFECTIONS IN SECTION BEAMS

The Blank Cotton Mills Co. Mill No. _____ Date _____

Warper Tender		1st. Shift		DEFECTS	Warper Tender		2nd. Shift	
No. 1	No. 2	No. 3	No. 4		No. 1	No. 2	No. 3	No. 4
				Crossed Ends				
				High Selvage				
				Low Selvage				
				Lost Ends in Body				
				Lost Ends in Selvage				
				Laps				
				Double Threads				
				Short Beams				
				Long Beams				
				Loose Beam Ends				

Run on Slasher No. _____ _____ Slasher Tender

Fig. 4. Form used by slasher tenders to record defects found in section beams.

Fig. 5. Record of bad cheeses removed from creel by warper tenders.

BAD CHEESES

The Blank Cotton Mills Company Mill No. ____ Spooling and Warping

NAME	W/E M T W T F S	W/E M T W T F S	W/E M T W T F S	W/E M T W T F S	W/E M T W T F S
Operators					

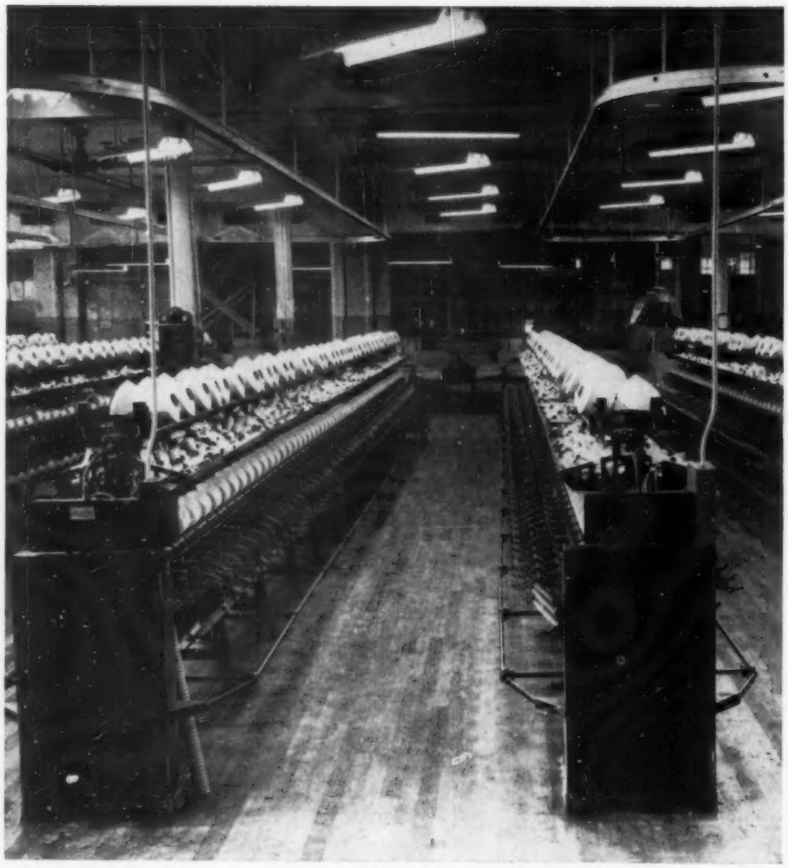
Fig. 6. Record of bad roving found by spinners.

BAD ROVING

The Blank Cotton Mills Co. Mill No.____ Date_____

NAME	CAUSES	M	T	W	T	F	S	TOTALS
	Singling							
	Doubling							
	H.K.							
	Other							
	Totals							
	Singling							
	Doubling							
	H.K.							
	Other							
	Totals							
	Singling							
	Doubling							
	H.K.							
	Other							
	Totals							
	Singling							
	Doubling							
	H.K.							
	Other							
	Totals							
	Singling							
	Doubling							
	H.K.							
	Other							
	Totals							
	Singling							
	Doubling							
	H.K.							
	Other							
	Totals							

Pictorial Presentation



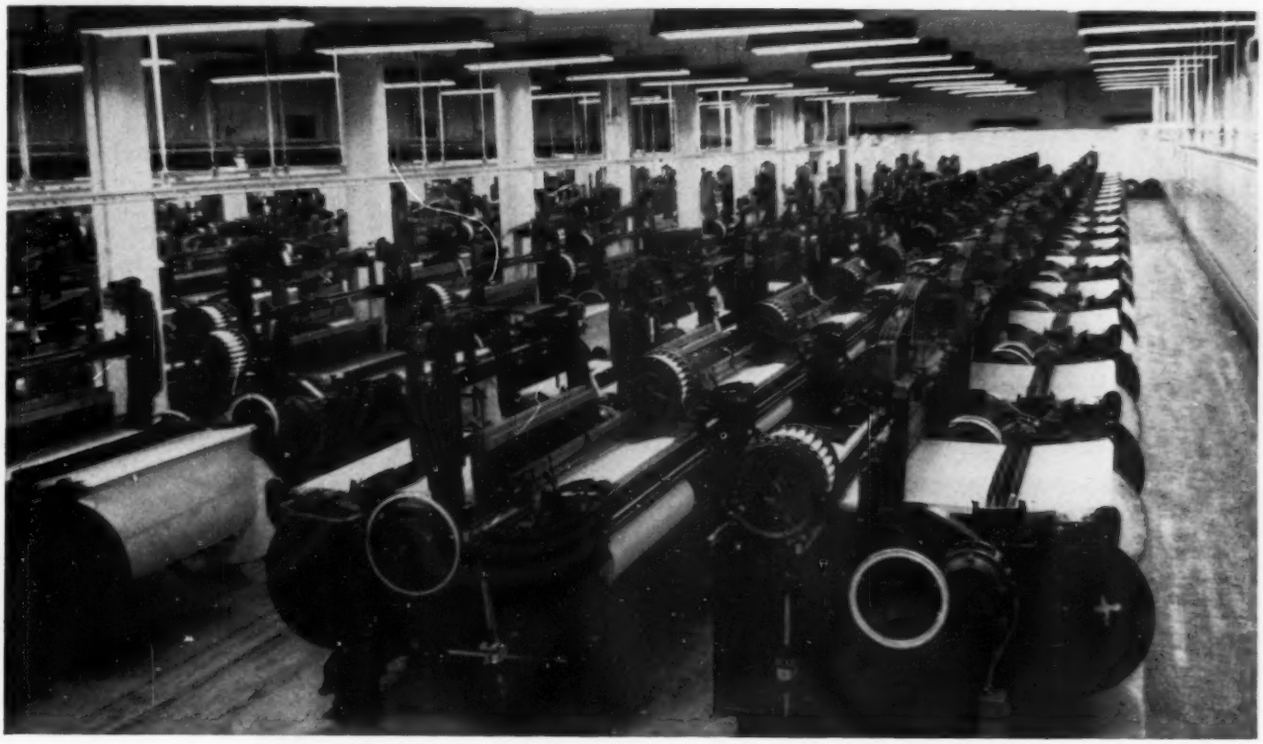
The next four pages offer a pictorial presentation of some modernization programs within the textile industry. Shown on this page is an installation of ten Universal Roto-Coners, 120 spindles each, at West Boylston Mfg. Co., Montgomery, Ala. Within the past year, this mill has completely converted its product from tire cord to the manufacture of single and two-ply warp and knitting yarns.

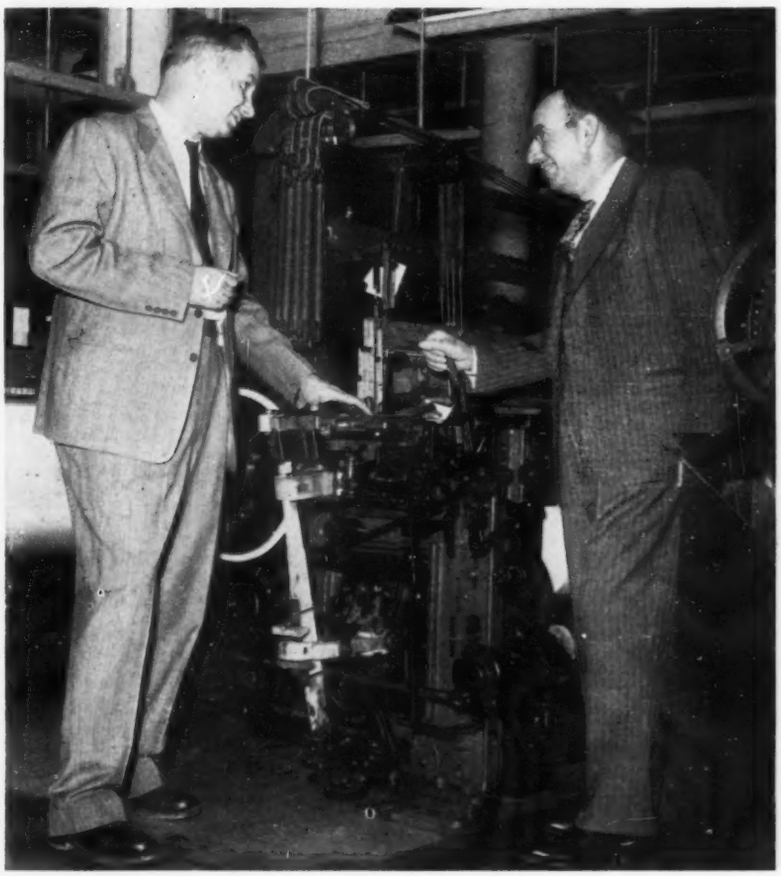
Cable twisters and looms have been discarded at West Boylston, but 7900 spindles of forming twisting have been retained; these have been converted to two-ply work.

Single yarns are still warped on section beams for the twisters. The finished yarns, both single and two-ply, are wound on these Roto-Coners for shipment to United Elastic Corp., the parent company, or to other users.

Note overhead cleaners and fluorescent lighting.

Of selected textile machinery installations during 1947, showing modernization programs at some well-known textile organizations.

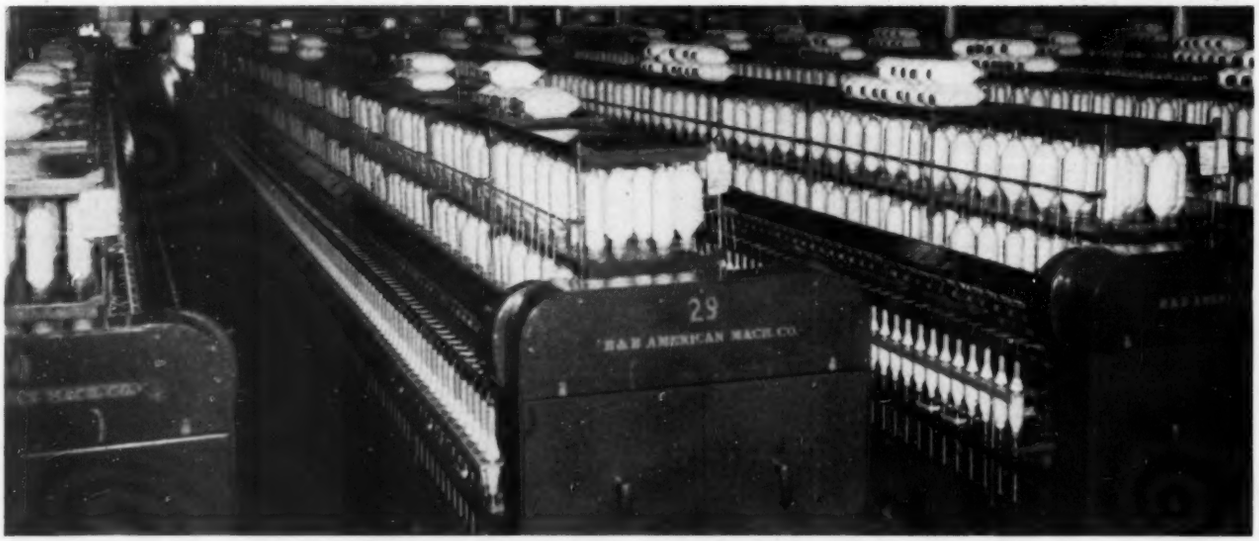




The photos on this page show a part of the modern weave shed at Riegel Textile Corp., Ware Shoals, S. C., plant. Designed to meet specific mill conditions, these 50" XP-Model Draper looms combine a high roll take-up with a center fork motion.

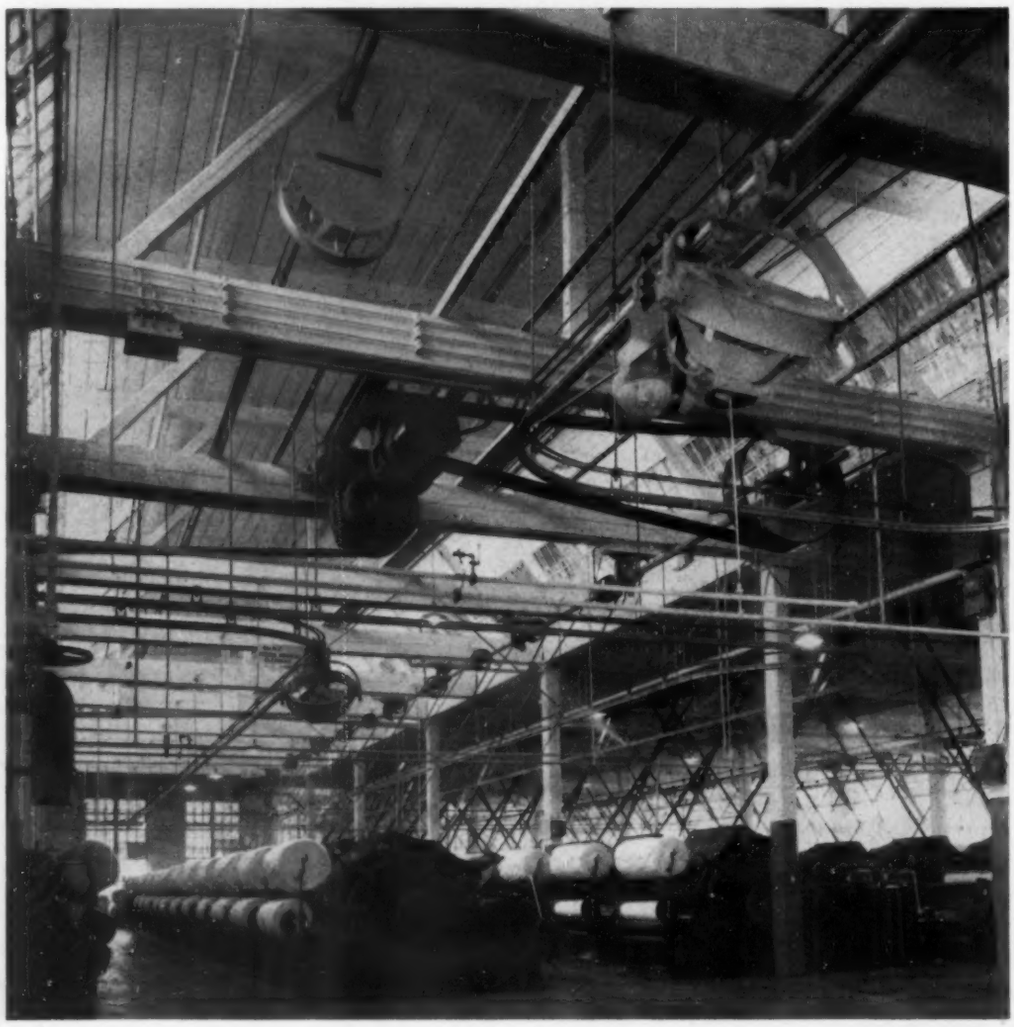
George Sessions, general superintendent, and H. W. Bagwell, superintendent, are shown at right examining one of the new looms, details of which may be seen in this photo.

Additional information on the modernization program at Ware Shoals is carried in the story beginning on page 102 of this issue.



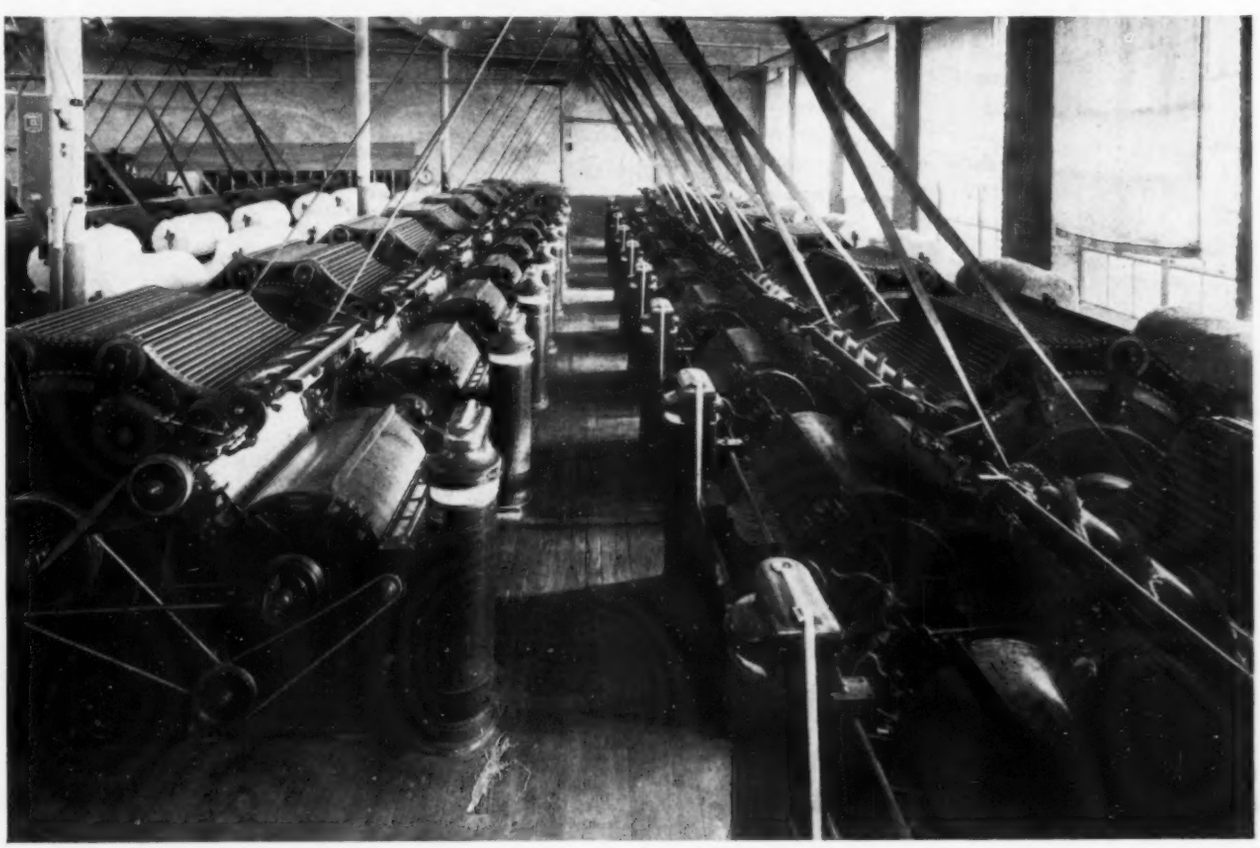
Above, installation of 40 H & B spinning frames in a southern mill. Featured in these "B" type frames are automatic precision weighting, streamlined saddle, and one-piece cradle. Ringrails are of extruded aluminum. Bijur system lubrication is used.

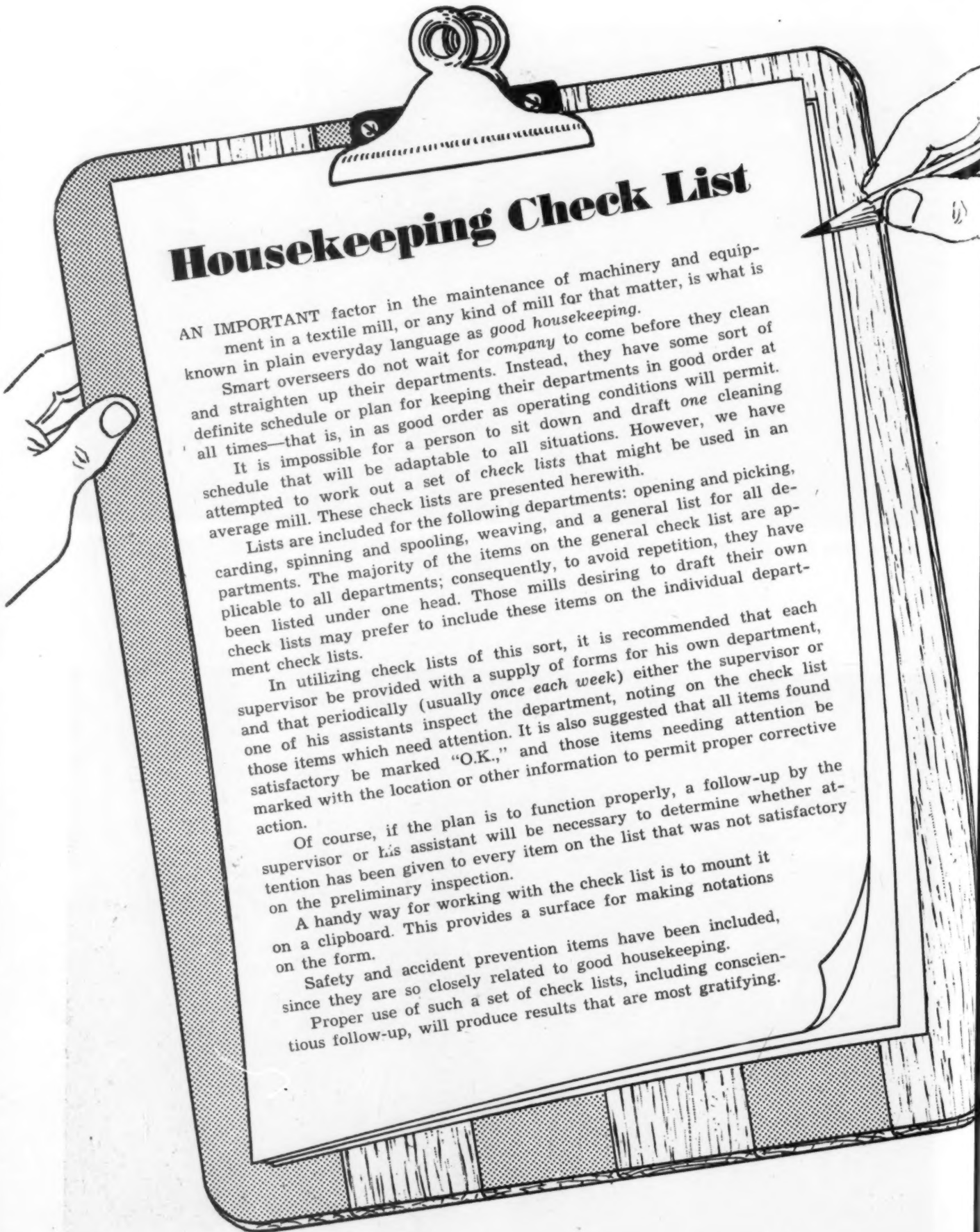
Below, overhead cleaning system in card room. Designed by American MonoRail, the system aids in preventing lint accumulation on pipes, wires, air ducts, and other overhead equipment. Air is directed against ceiling.



Above, Alma Mills, Gaffney, S. C., have installed Whitin's "KFS" drawing and Model L cards, latter seen in background.

Below, close-up of the Model L card installation at Alma Mills.





Housekeeping Check List

AN IMPORTANT factor in the maintenance of machinery and equipment in a textile mill, or any kind of mill for that matter, is what is known in plain everyday language as *good housekeeping*.

Smart overseers do not wait for *company* to come before they clean and straighten up their departments. Instead, they have some sort of definite schedule or plan for keeping their departments in good order at all times—that is, in as good order as operating conditions will permit.

It is impossible for a person to sit down and draft *one* cleaning schedule that will be adaptable to all situations. However, we have attempted to work out a set of *check lists* that might be used in an average mill. These check lists are presented herewith.

Lists are included for the following departments: opening and picking, carding, spinning and spooling, weaving, and a general list for all departments. The majority of the items on the general check list are applicable to all departments; consequently, to avoid repetition, they have been listed under one head. Those mills desiring to draft their own check lists may prefer to include these items on the individual department check lists.

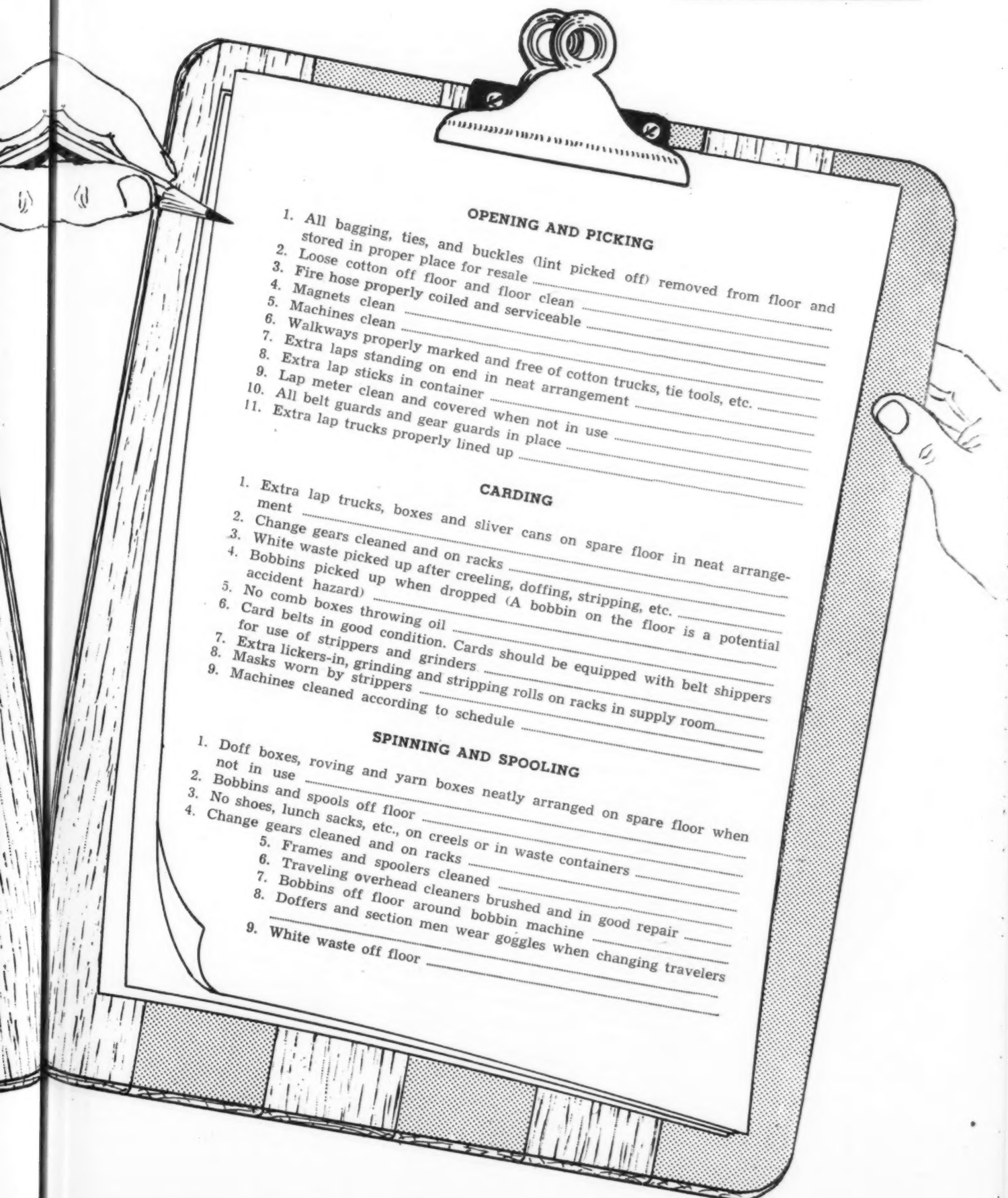
In utilizing check lists of this sort, it is recommended that each supervisor be provided with a supply of forms for his own department, and that periodically (usually *once each week*) either the supervisor or one of his assistants inspect the department, noting on the check list those items which need attention. It is also suggested that all items found satisfactory be marked "O.K.," and those items needing attention be marked with the location or other information to permit proper corrective action.

Of course, if the plan is to function properly, a follow-up by the supervisor or his assistant will be necessary to determine whether attention has been given to every item on the list that was not satisfactory on the preliminary inspection.

A handy way for working with the check list is to mount it on a clipboard. This provides a surface for making notations on the form.

Safety and accident prevention items have been included, since they are so closely related to good housekeeping.

Proper use of such a set of check lists, including conscientious follow-up, will produce results that are most gratifying.



OPENING AND PICKING

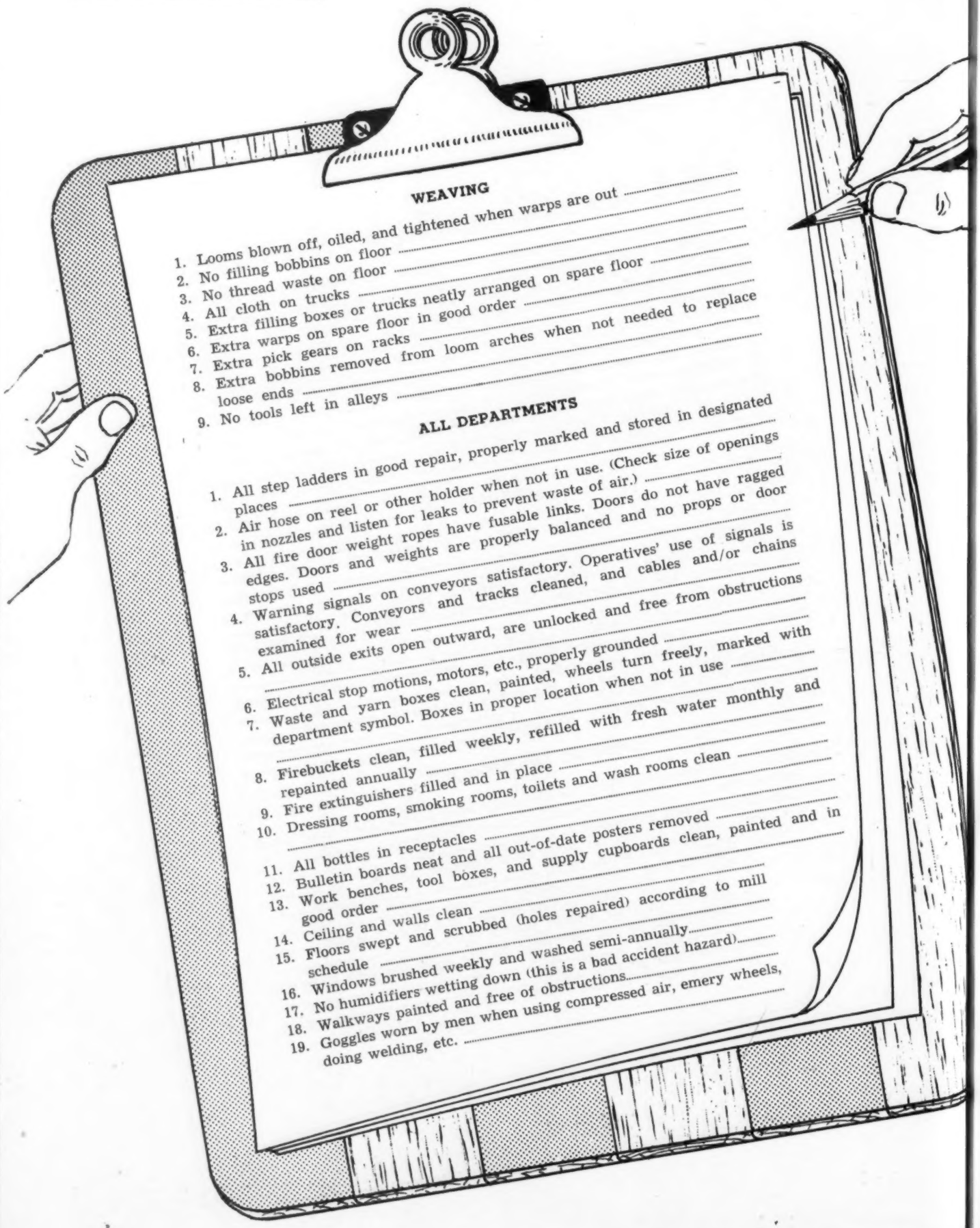
1. All bagging, ties, and buckles (lint picked off) removed from floor and stored in proper place for resale _____
2. Loose cotton off floor and floor clean _____
3. Fire hose properly coiled and serviceable _____
4. Magnets clean _____
5. Machines clean _____
6. Walkways properly marked and free of cotton trucks, tie tools, etc. _____
7. Extra laps standing on end in neat arrangement _____
8. Extra lap sticks in container _____
9. Lap meter clean and covered when not in use _____
10. All belt guards and gear guards in place _____
11. Extra lap trucks properly lined up _____

CARDING

1. Extra lap trucks, boxes and sliver cans on spare floor in neat arrangement _____
2. Change gears cleaned and on racks _____
3. White waste picked up after creeling, doffing, stripping, etc. _____
4. Bobbins picked up when dropped (A bobbin on the floor is a potential accident hazard) _____
5. No comb boxes throwing oil _____
6. Card belts in good condition. Cards should be equipped with belt shippers for use of strippers and grinders _____
7. Extra lickers-in, grinding and stripping rolls on racks in supply room _____
8. Masks worn by strippers _____
9. Machines cleaned according to schedule _____

SPINNING AND SPOOLING

1. Doff boxes, roving and yarn boxes neatly arranged on spare floor when not in use _____
2. Bobbins and spools off floor _____
3. No shoes, lunch sacks, etc., on creels or in waste containers _____
4. Change gears cleaned and on racks _____
5. Frames and spoolers cleaned _____
6. Traveling overhead cleaners brushed and in good repair _____
7. Bobbins off floor around bobbin machine _____
8. Doffers and section men wear goggles when changing travelers _____
9. White waste off floor _____



WEAVING

1. Looms blown off, oiled, and tightened when warps are out
2. No filling bobbins on floor
3. No thread waste on floor
4. All cloth on trucks
5. Extra filling boxes or trucks neatly arranged on spare floor
6. Extra warps on spare floor in good order
7. Extra pick gears on racks
8. Extra bobbins removed from loom arches when not needed to replace loose ends
9. No tools left in alleys

ALL DEPARTMENTS

1. All step ladders in good repair, properly marked and stored in designated places
2. Air hose on reel or other holder when not in use. (Check size of openings in nozzles and listen for leaks to prevent waste of air.)
3. All fire door weight ropes have fusable links. Doors do not have ragged edges. Doors and weights are properly balanced and no props or door stops used
4. Warning signals on conveyors satisfactory. Operatives' use of signals is satisfactory. Conveyors and tracks cleaned, and cables and/or chains examined for wear
5. All outside exits open outward, are unlocked and free from obstructions
6. Electrical stop motions, motors, etc., properly grounded
7. Waste and yarn boxes clean, painted, wheels turn freely, marked with department symbol. Boxes in proper location when not in use
8. Firebuckets clean, filled weekly, refilled with fresh water monthly and repainted annually
9. Fire extinguishers filled and in place
10. Dressing rooms, smoking rooms, toilets and wash rooms clean
11. All bottles in receptacles
12. Bulletin boards neat and all out-of-date posters removed
13. Work benches, tool boxes, and supply cupboards clean, painted and in good order
14. Ceiling and walls clean
15. Floors swept and scrubbed (holes repaired) according to mill schedule
16. Windows brushed weekly and washed semi-annually
17. No humidifiers wetting down (this is a bad accident hazard)
18. Walkways painted and free of obstructions
19. Goggles worn by men when using compressed air, emery wheels, doing welding, etc.

Shown below is another form of housekeeping check list that is used in one large textile mill. This particular form was designed for conducting a general inspection of the entire mill. Note type of information contained on both sides of the form.

Report of Inspection made by ..... on ....., 19....

The Inspector will use O in every case where OK could be used, and when he wishes to report an unsatisfactory condition, he will use X. In all cases where he has no report to make, he will use a dash (—).

FRONT

	Floor and Corners	Removal of Waste	Ceiling, Walls and Posts	Windows and Sills	Pipes	Electric Lights and Wires	Switches and Switch Boxes	Fire Bucket	Machinery	Hangers and Shafting	Work Benches and Table	Cupboards and Stationery Boxes	Bins	Oil Cabinets	Hauling Boxes and Trucks	Toilet Rooms	Dressing Rooms	Supply Rooms	Gear Rooms	Humidifiers	Hand Hose and Fittings	Gear and Harness Racks	Elevator Shaft and Pit	Skylights	Fire Extinguishers	
Opener Room																										
Picker Rooms																										
Card																										
Speeder																										
Carding (Basement)																										
Spinning																										
Spooling																										
Abbott Winding																										
Spinning (Basement)																										
Twisting																										
Filling Winding																										
Beaming																										
Drawing In																										
Dust Room																										
Repair Shop																										
Roller Shop																										
Boiler Room																										
Fire Pump Room																										
Air Comp & Pump Room																										
Switch Room No. 1																										
" " No. 2																										
Switch Room Storage No. 1																										
" " " No. 2																										
Front Stairs																										
Back Stairs																										
North Wing Stairs																										
Machine Shop Stairs																										
Warehouse—Sec. No. 1 (Waste Room)																										
" " " 2 (Waste Room)																										
" " " 3																										
" " " 4																										
" " " 5																										
" " " 6																										
" " " 7 (Supply Room)																										
" " " 8 (New Cotton W.H.)																										
" Cotton Shed																										

shut or without strap, state reason

		Valve No.	Controlling:	Valve No.	Controlling:	Valve No.	Controlling:		
		17	Division North Machine Shop	33	Northwest Cor. Weave No. 2	49	Picker Hopper—4		
		18	Speeder Bobbin Bin	34	Dust Room Inside Valve	50	Picker Hopper—4	66	
		19	New Cotton Warehouse	35	Opener Room Inside Valve	51	Picker Hopper—5	67	Wa... Op...
	...ion	20	Division West of Boiler Room	36	Picker Room Inside Valve	52	Picker Hopper—5	68	Overflo... Opener
	...nection	21	Dry Pipe Valve at Cotton Shed, bet. Waste & Opener Rooms	37	Hand Hose Opener Room	53	Picker Hopper—6	69	Bobbin Lin... Hopper—O... Room
	Dust, Opener & Picker Rooms	22	Mill Office	38	Hand Hose Picker Room	54	Picker Hopper—6	70	Picker Hopper Waste Room
	Oil House	23	Riser Boiler Room	39	Elevator No. 4 Tower—North Wing	55	Picker Hopper—7	71	Horizontal Cleaner—Waste Room
	Division East of Waste Room	24	Riser Roof Garden	40	South Division West of Main Mill	56	Picker Hopper—7	72	Horizontal Cleaner Waste Room
9	Waste Room—Whse. Secs. 3-4	25	Shop Stairs	41	North Division West of Main Mill	57	Picker Hopper—8	73	Condenser Waste Room
10	West Riser Main Mill	26	Dry Pipe Valve—Covered Platforms, Railroad Siding, New Cotton Warehouse Platforms, Elevator No. 3 Tower & Eaves of Whse. No. 8	42	Large Condenser Picker Room	58	Picker Hopper—8	74	Condenser Waste Room
1	East Riser Main Mill	27	Opener Feeder Hoppers and Centrifugal Machines	43	Small Condenser Picker Room	59	Picker Hopper—9	75	One Man Hand Hose—Waste Room
	South Riser Wing	28	Switch Room & Electrical Supply Rooms	44	Picker Hopper—1	60	Picker Hopper—9	76	One Man Hand Hose—Opening Room
	Machine Shop, Staircase, Lunch Room & Roof Garden	29	Electric Pump Suction	45	Picker Hopper—2	61	Picker Hopper—10	77	One Man Hand Hose—New Cotton W...
	...h Riser ...g	30	Electric Pump Discharge	46	Picker Hopper—2	62	Picker Hopper—10	78	Eaves—W... house
	...se 5-6	31	Bobbin Lint Room, Supply Room for Picker, Card and Opener Rooms, Elevator No. 5 Tower, Dressing and Storage Rooms	47	Picker Hopper—3	63	Picker Hopper—11	79	Hydra...
		32	Northwest Cor Weave No. 1	48	Picker Hopper—3	64	Picker Hopper—11		

following valves (numbers here given) should re...

BACK

MATERIALS HANDLING AT PACIFIC MILLS

Photos on pages 116, 117, *and* 118 *courtesy, Cleveland Tramrail Div., The Cleveland Crane and Eng. Co.*

By FRANCIS A. WESTBROOK
Mechanical Engineer

Savings in time and manpower, increased production, improved safety conditions, and more efficient use of floor space are among advantages derived.

PACIFIC MILLS, in their South Carolina plants, have in service several types of materials handling equipment which are used to very good advantage. In addition to reducing costs, such equipment has been a means of increasing production, improving safety, promoting orderliness, and making possible more efficient use of floor space. They have extensive overhead tramrail systems with interlocking features, belt conveyors to transport goods between departments in the finishing plant, and electrically powered fork lift trucks for unloading and storing supplies.

Overhead Handling

In one of the two large weave rooms at the Lyman, S. C., mill, there are some 700 looms varying in size from 50-inch to 100-inch for weaving sheets. The beams weigh up to 1500 pounds. Five parallel crane runways with two one-ton manually operated cranes on each make complete overhead transportation possible. This makes it practical to place the looms closer together than if aisles large enough for movement of the beams had to be provided.

The accurately maneuverable hoists also make it a simple matter to put the beams in place on the looms and to remove them. Complete machanical handling like this is obviously helpful in preventing injury to employees as it obviates all lifting and moving of heavy loads. Congested or obstructed aisles are also avoided, and maximum movement is assured.

Transportation of large rolls of cloth at the Lyman mill, some of which weigh as much as 400 pounds, from roll storage to the jig dyeing department is accomplished by means of a two-track

line over the storage space, at right angles to it, and by monorails over the two lines of dyeing jigs. The arrangment in the jig dyeing department is shown diagrammatically in Fig. 1.

The roll storage is covered by a completely motorized transfer bridge. Rolls are picked up by the motorized hoist, Fig. 2, and carried by the bridge to one of the monorails above the jigs. The motorized hoist, or carrier, then transfers from the bridge to the desired monorail and deposits its roll at the designated jig, Fig. 3

In the roll storage space it was formerly possible to stack the heavier rolls only two high by manual handling, but with overhead tramrail mechanical handling they can be stacked three high. This, of course, increases the storage capacity by about 50%, saves time and labor, and reduces accident hazards. The direct delivery of the rolls from storage to the dyeing jigs does away with all manual handling at this point and, as some million yards of cloth is run through the 23 jigs per week, the advantages are obvious.

Rolls are handled in the calender room by means of a motorized carrier-hoist of one ton capacity. traveling on an overhead tramrail. This is shown in Fig. 4. Three rolls are handled at a time by one man, operating a pendant push button control, who places them directly in the machines without any manual handling. After cal-

Fig. 1. Diagram showing arrangement for transporting rolls of cloth from roll storage to dyeing jigs.

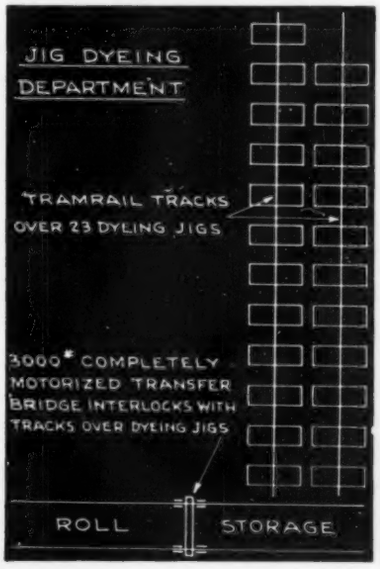
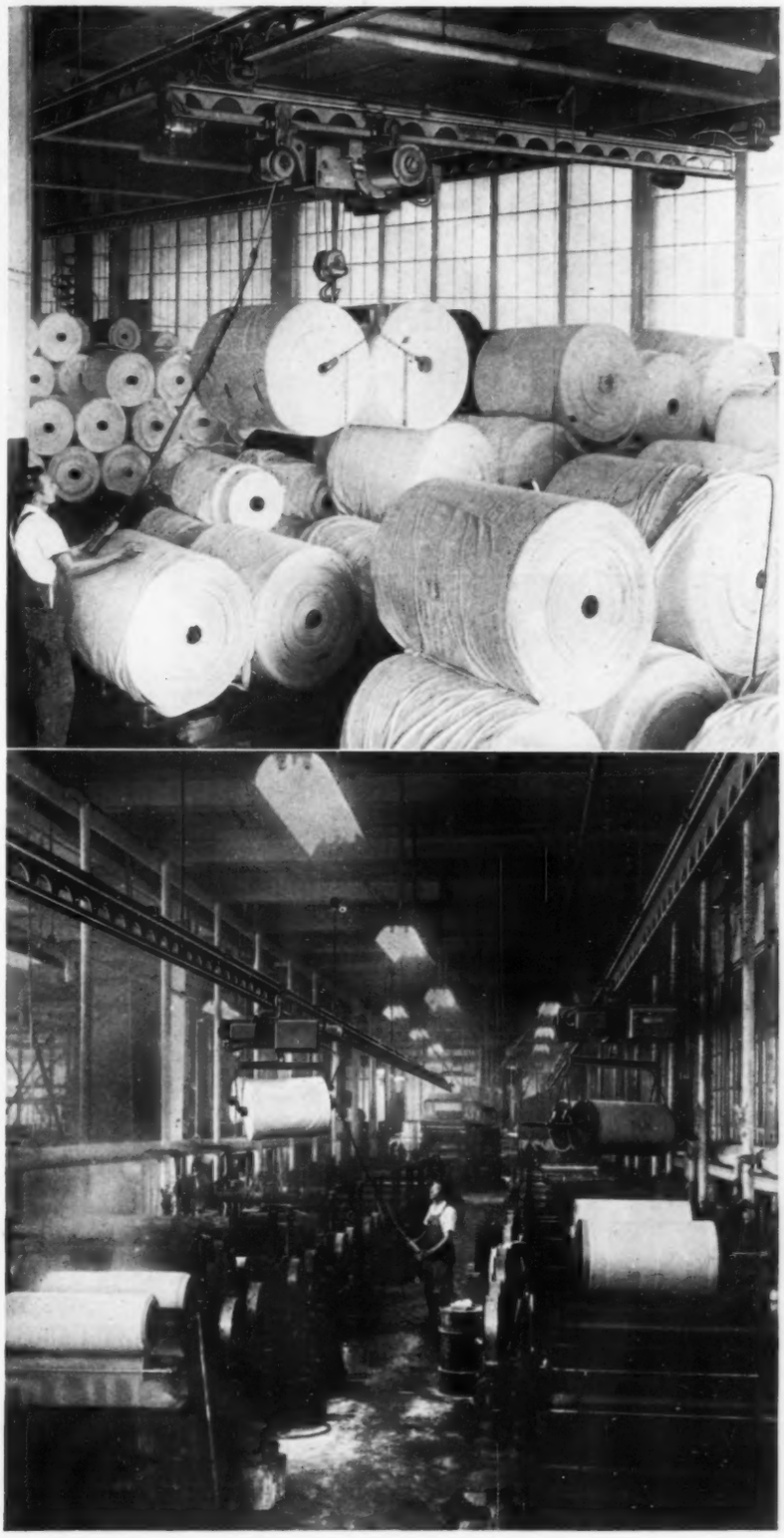
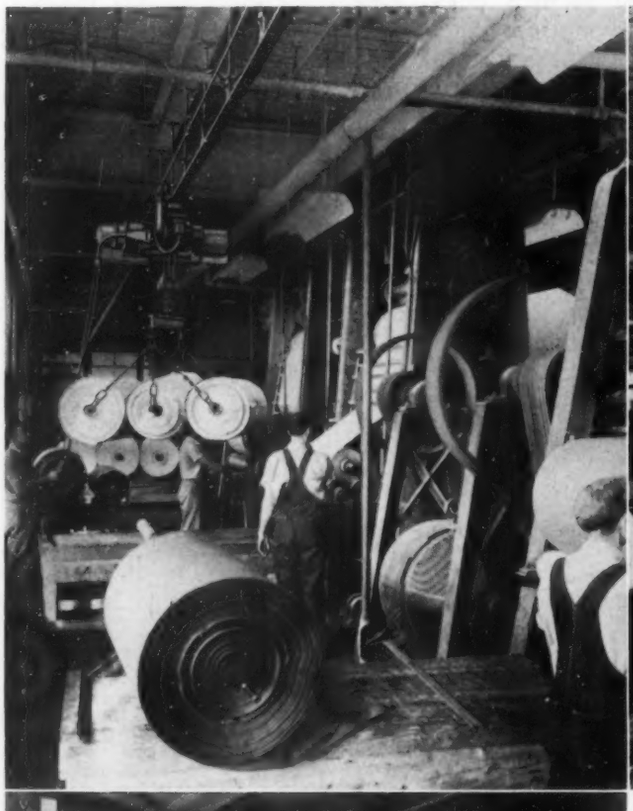
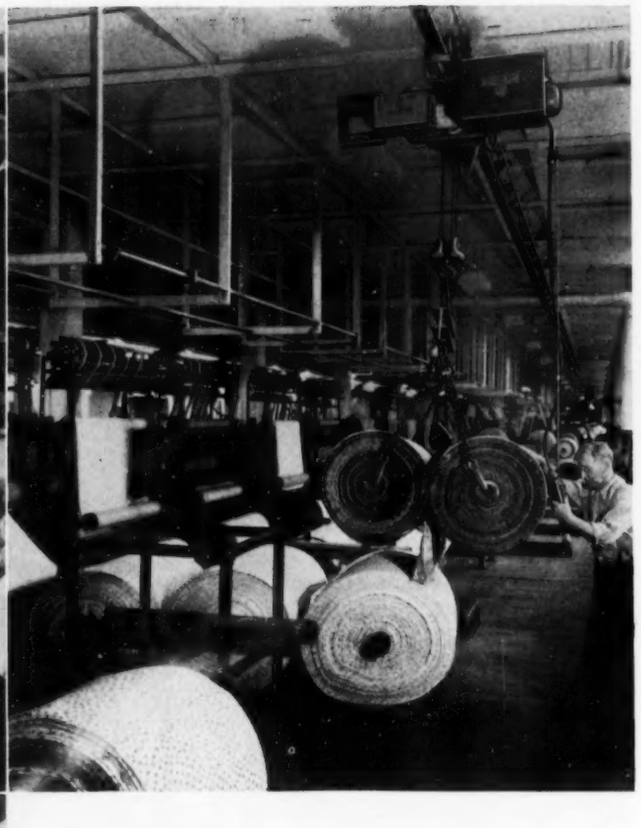


Fig. 2 (upper photo). View of roll storage area showing motorized transfer bridge which interlocks with either of the two monorails over the two lines of dyeing jigs shown in Fig. 3 below.







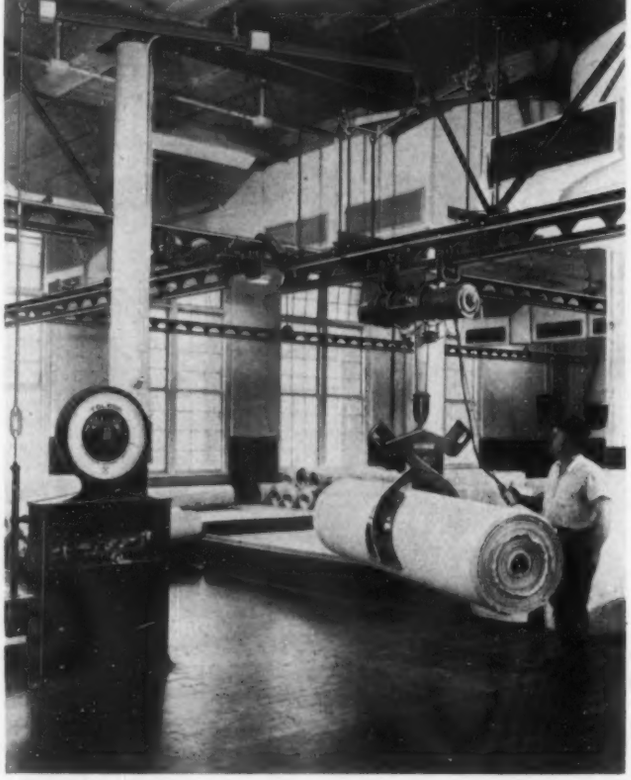


Fig. 4 (upper left). The calender room is equipped with overhead tramrail system and motorized carriers. Three rolls of cloth are handled at a time.

Fig. 5 (upper right). Motorized carrier is used for delivering rolls of cloth to hookers for inspection and bolting.

Fig. 6 (at left). A heavy roll of cloth is weighed by use of overhead monorail scale section at Pacific Mills' Granby plant at Columbia, S. C.

endering, the rolls are removed in the same way.

Two or three rolls of cloth are delivered at once to the hookers for inspection and bolting by the electrified traveling monorail hoist, shown in Fig. 5. With this system only one man is required to place them in position.

After inspection, the cloth may be taken from the machines to a scale track section of the overhead

Fig. 7. Packages of finished goods are moved about in the shipping department on roller-type trackage for stenciling, weighing, etc.

tramrail for weighing, as seen in Fig. 6. This photograph was made at the Granby Mill in Columbia, S.C. Weight readings are indicated on the floor scale. When weighed, the rolls are carried on the overhead system to storage.

Storage of Empty Beams

A system employed at the Granby Mill for storing empty beams, consists of racks and a hand propelled crane with a chain hoist for placing the empty beams on the rack or removing them from it. Orderly storage is thus made possible. The storage space required is cut to a minimum, damage to the beam journals is greatly reduced, and the first two or three yards of cloth, generally lost, are saved. There is also the usual reduction of accidents and savings in time and labor. The racks are designed to hold 24 beams each and to permit easy handling of the beams in and out.

Other Handling Equipment

In addition to the overhead tramrail equipment, there are power driven belt conveyors to transport goods between various departments in the Lyman plant. They are practically totally enclosed. There is also considerable roller type track conveyor on which cases, cartons, etc., are strapped, weighed, stenciled and otherwise prepared for shipping. Fig. 7 shows the weighing and stenciling of packages moved from place to place in the shipping department on roller track.

Electric fork lift trucks are used for storing, loading and unloading supplies and finished goods. Fig. 8 shows a truck handling grey goods from freight cars to storage or process. Use of the telescoping type of lift truck makes it possible to take full advantage of the 20-foot high ceilings in the warehouses by stacking. These fork lift trucks are useful for many purposes, as is exemplified by the use made of them by the mechanical department on week ends for maintenance work, and also frequently for the installation of new equipment.

Fig. 8. Telescoping type fork lift trucks are used for transporting materials and for stacking packages in warehouses with 20-foot ceilings.

Modern Mill Village Layout

By JOHN LEON HOFFMAN
Landscape Architect and Community Planner

A plan for expanding existing mill villages to include an attractive residential area for those employees who desire to buy lots and build their own homes.

THE PROBLEM of maintaining an adequate labor supply in the textile industry has been for some time and still is a grave one. Before the advent of the automobile, it was necessary that employees live within walking distance of the mill. And even now it is not desirable to have them live too far away.

In the past, villages were built in connection with the mills in order that employees might walk to work. Then, too, mill owners for various reasons preferred to own the houses which their employees occupied.

However, with the advent of higher wages, better educational opportunities, the automobile, radio, and other things which have contributed to changing living conditions, it is my observation that the workers are not satisfied with conditions in the ordinary mill village. This is especially true in the case of those employees with children who have finished high school and are, in a large number of instances, persuading their parents to leave the mill village or are demanding a great deal more in the way of housing.

To cope with this situation, a large number of mills are today modernizing their villages. This will in a measure, at least temporarily, satisfy some of the employees and their families. At the same time it is believed that as soon as the building material and labor situation has been stabilized, the employees will very likely become dissatisfied with the conventional company owned houses—especially when their friends begin to build their own houses with modern conveniences and large lots.

Other mills have resorted to selling the individual houses in the company village to the occupants thereof. Again, this procedure may be a temporary solution to the problem, particularly while building materials are still scarce and prices high. However, it is my opinion that only a small percentage of the employees will be satisfied with this arrangement after materials are available, and it is possible to build houses of their own design on large lots and at other locations.

Attractive Residential Area A Practical Solution

A few mills have derived what seems to me to be the most practical means of confronting this situation—that is, they have developed a nice attractive residential area in the vicinity of the mills where the employees may purchase lots and build homes according to their own desires.

These homes are in some instances financed by the company. This is not necessary today, however, since a person with good character, a steady job, and a small down payment can easily find ready money for home building.

Advantages

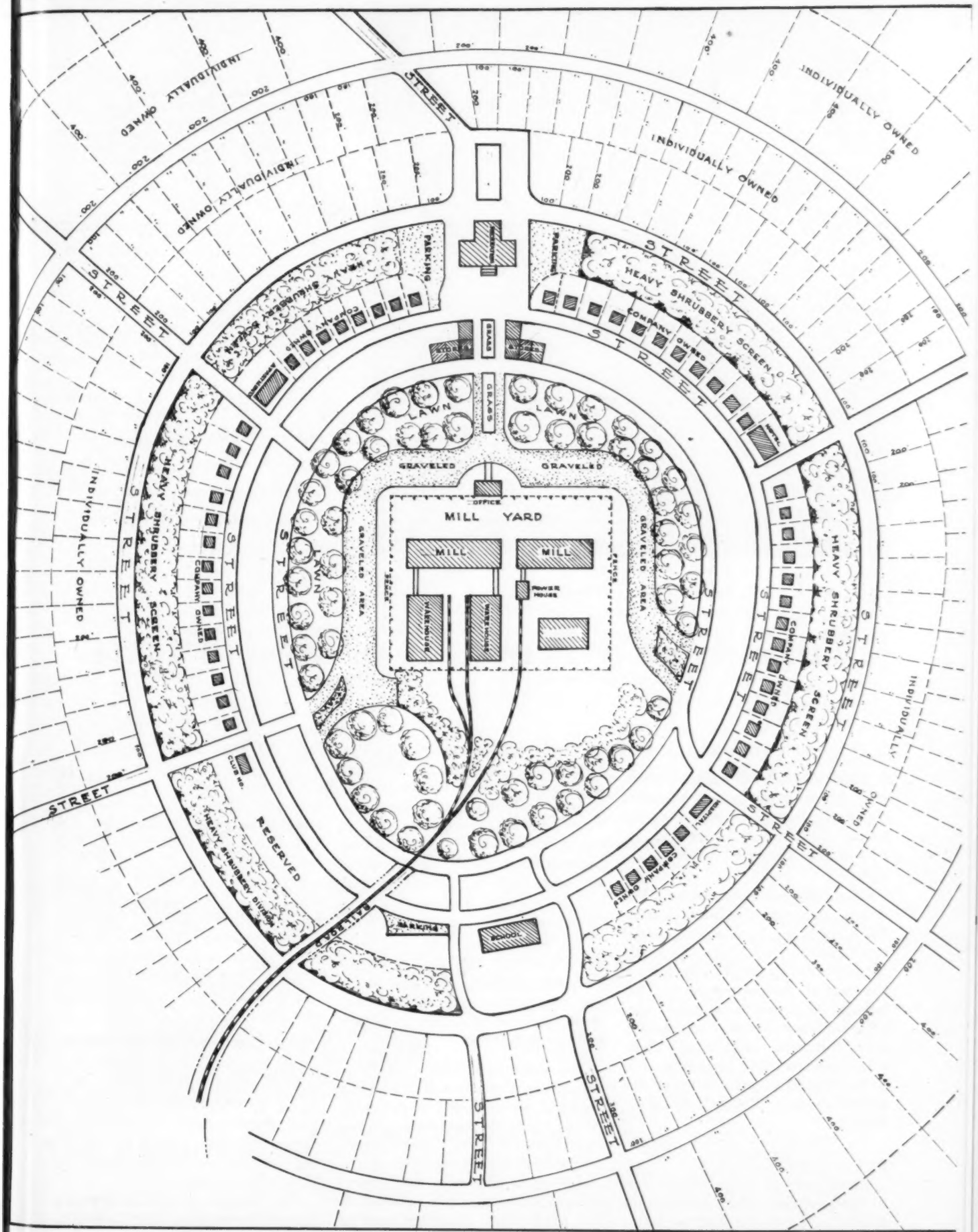
Development of such a residential area can be a profitable undertaking for a company or a subsidiary organization. The area can be made so attractive that a large number of employees will immediately take advantage of the opportunity to buy lots and start building homes of their own.

Home ownership will not only build pride in the employees, but also will make of them better workers and better citizens.

In this connection, many textile mills are financing the purchase of small farms and homes for their employees. These are, in many instances, scattered over a large territory—some many miles from the mill. Disadvantages with this arrangement are: (1) It is sometimes difficult to travel back and forth to work due to bad weather; (2) Large tracts of land require large investments; (3) There is a tendency for the employee to be absent from the mill at planting and harvesting seasons because many of them attempt to farm on a small scale.

To satisfy the desires of those employees who are inclined to farm, it is recommended that in planning a residential area such as the one suggested here, large lots be provided to permit owners to have a garden, a few fruit trees, chickens, and even a cow if desired.

The accompanying drawing illustrates one such development which was planned for a textile mill. It shows how the project can be tied in with an existing village and plant. Of course, location of the residential area, the topography of the ground, and other factors require that each site be studied and designed to fit the local conditions.


MILL YARD
MILL
MILL
OFFICE
POWER HOUSE
WAREHOUSE
WAREHOUSE
GRAVELED
GRAVELED
GRAVELED AREA
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LAWN
LAWN
GRASS
FENCE
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COMPANY OWNED
PARKING
PARKING
PARKING
PARKING
RESERVED
CLUB HO.
HEAVY SHRUBBERY DIVIDER
SCHOOL
CEMETERY
CEMETERY
PENNED

A line of Whitin "LW" drawing frames used for processing wool fiber in the manufacture of worsted yarns at Highland City Mills, Inc., Talladega, Ala. Note static eliminators mounted over each frame; also air changing units and fluorescent lighting overhead.

New Alabama mill is manufacturing worsted knitting and weaving yarns on the American system.

Talladega's New Worsted Plant

Staff Prepared

A NEW WORSTED mill designed for the manufacture of quality worsted knitting and weaving yarns, is nearing completion in Alabama's "Highland City"—Talladega.

Originally incorporated in 1947 under the name Coosa Valley Mills, Inc., the firm was recently redesignated Highland City Mills, Inc., in order to avoid confusion on the part of the postmaster at Talladega, salesmen, customers, and others having business to transact with this new mill, since there were so many other establishments in the Talladega area utilizing the words "Coosa Valley" in their titles.

Facilities

From even a casual inspection of the premises, it is obvious that in planning consideration was given to the production of a quality product and comfortable working conditions for the employees. A Bahnson air changing system has been installed, and the mill is equipped with fluorescent lighting fixtures throughout. Modern locker rooms have been installed, and new toilets and wash rooms have been built.

The mill is housed in the two-story building that was formerly occupied by Samoset Cotton Mills, Inc. A new and modern office has been constructed adjacent to the main mill building.

The American system for the manufacture of worsted yarns from tops will be employed at this mill. At the time this story was written, machinery erection crews were busily engaged in completing installation of the new machinery; consequently, the mill was not in full production. However, part of the equipment is already installed and operating, and as each new machine is made ready for operation and turned over to the mill, stock is immediately provided and the unit placed on a production basis.

Equipment already installed or in process of installation is as follows: gill boxes, drawing frames, roving frames, spinning frames, winders, twisters, skein reelers, yarn conditioning equipment, laboratory and auxiliary equipment.

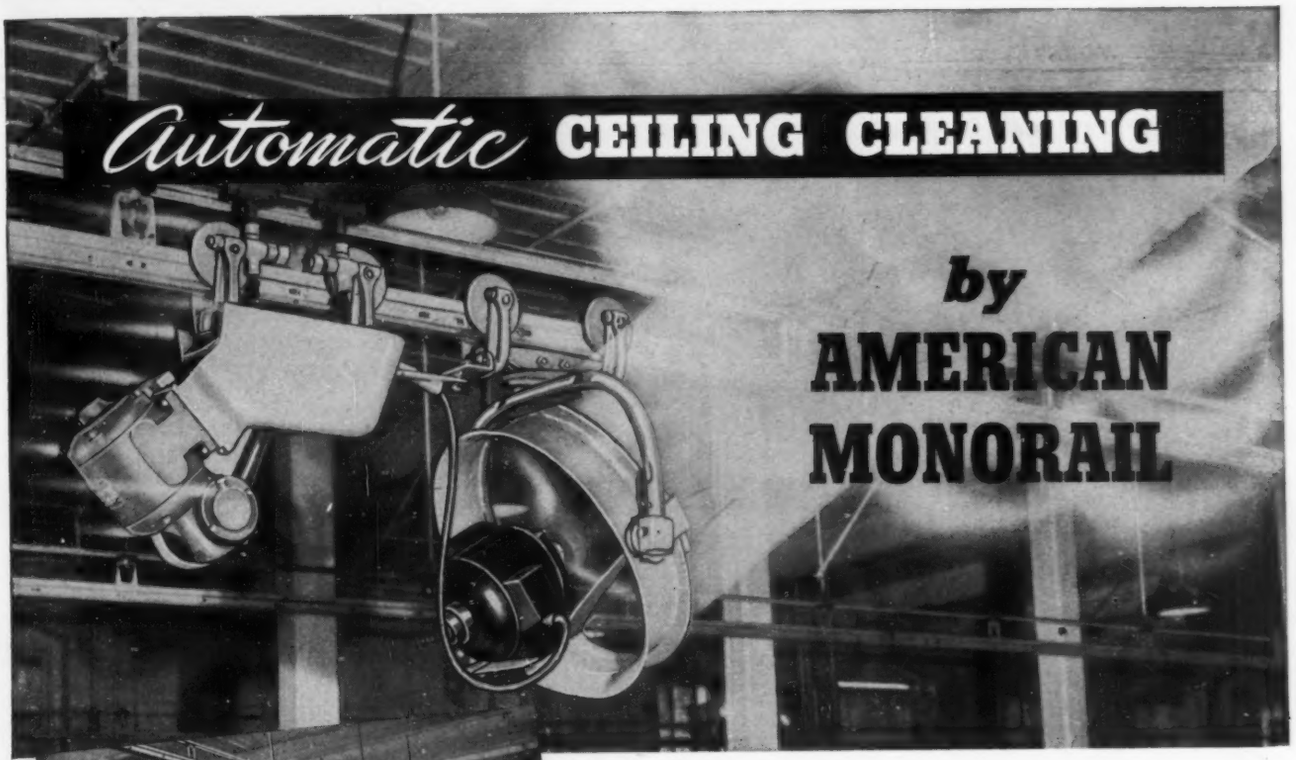
Gilling and Drawing Equipment

Gill boxes are of the double head, can gill type as manufactured by Prince-Smith & Stells, Ltd. Experiments are also being conducted with a new pin drafting machine recently developed by Warner & Swasey Co.

Two models of Whitin drawing frames have been installed—the

Automatic CEILING CLEANING

by AMERICAN MONORAIL



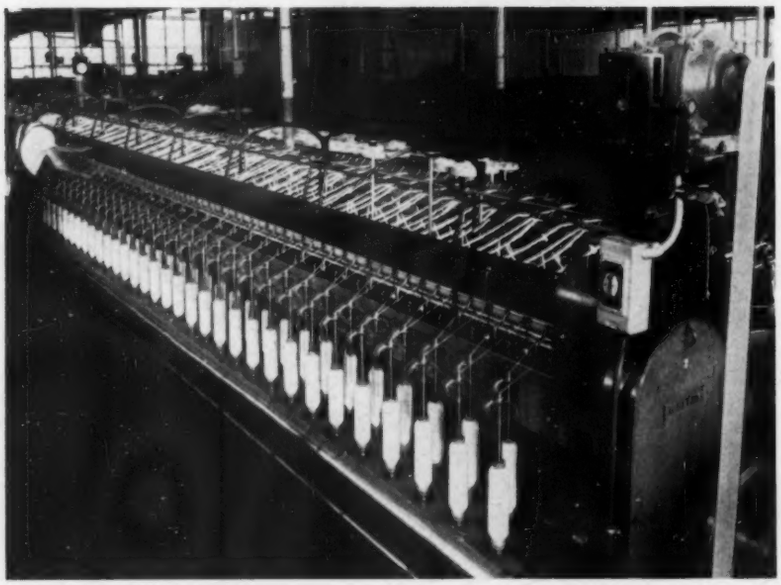
Mops, brooms and air hoses are out as far as ceiling cleaning is concerned. High labor cost and lost production during time down make these tools obsolete. In one mill these costs amounted to approximately $1.50 per hour—the cost of installing automatic ceiling cleaning was absorbed by savings in less than a year.

Automatic cleaning is installed on overhead monorail track. A high-velocity propeller type fan unit travels around a loop of monorail track and sends a blast of air against the ceiling preventing any accumulation of lint or fly.

Fans may be adjusted to reach any spot in the room. Automatic ceiling cleaners are no longer an experiment. They are being installed in many mills. Let an American MonoRail engineer give you complete details.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**



Above, view of one of the roving frames used for processing wool. Individual motor drive is mounted over head end as shown at right.

Below, scene in spinning room. Creels are the umbrella type. Centralized lubrication is employed on head end of frames.

"LWB" and "LW." The drafting and coiling mechanisms are the same on both models, but the "LWB" frames are built to take care of unwinding the top when it is desired to eliminate the gilling and/or pin drafting processes. These drawing frames do not have calender rolls like the conventional or regular drawing frames, but instead, the coiler gears are made with small calender rolls in each plate.

Another interesting feature about these models of drawing frames is the gyrating can table that is used instead of the revolving type found on regular drawing frames. It is understood that an advantage of this arrangement is that it eliminates all twist in the sliver can. All lines of drawing are equipped with static eliminators which are standard attachments for these models.

Roving and Spinning Frames

Roving frames were built by Whitin and are of the Whitin-Woonsocket Super-Draft type. Each frame is equipped with individual motor drive.

Model F2 spinning frames are being installed. Up to the roller beam, these frames are practically the same as Whitin's standard cotton type frame. From the roller beam up, they are special. Creels are of the umbrella type. Frame heads are equipped with Bijur centralized lubrication systems.

A sufficient number of Universal winders have been installed to provide packages for the twisters, as well as packages in accordance with customers' specifications.

Quality Control

A modern quality control laboratory is being installed, and it will be completely equipped with all of the instruments necessary for the inspection of raw materials, finished products, as well as products of the various processes. Among the instruments to be included in the laboratory set-up are: tensile strength testers, fiber fineness gauges, wool fiber stapling apparatus, twist counters, yarn evenness control, moisture testers, sliver testers, etc.

Nothing Rolls Like a Ball . . .

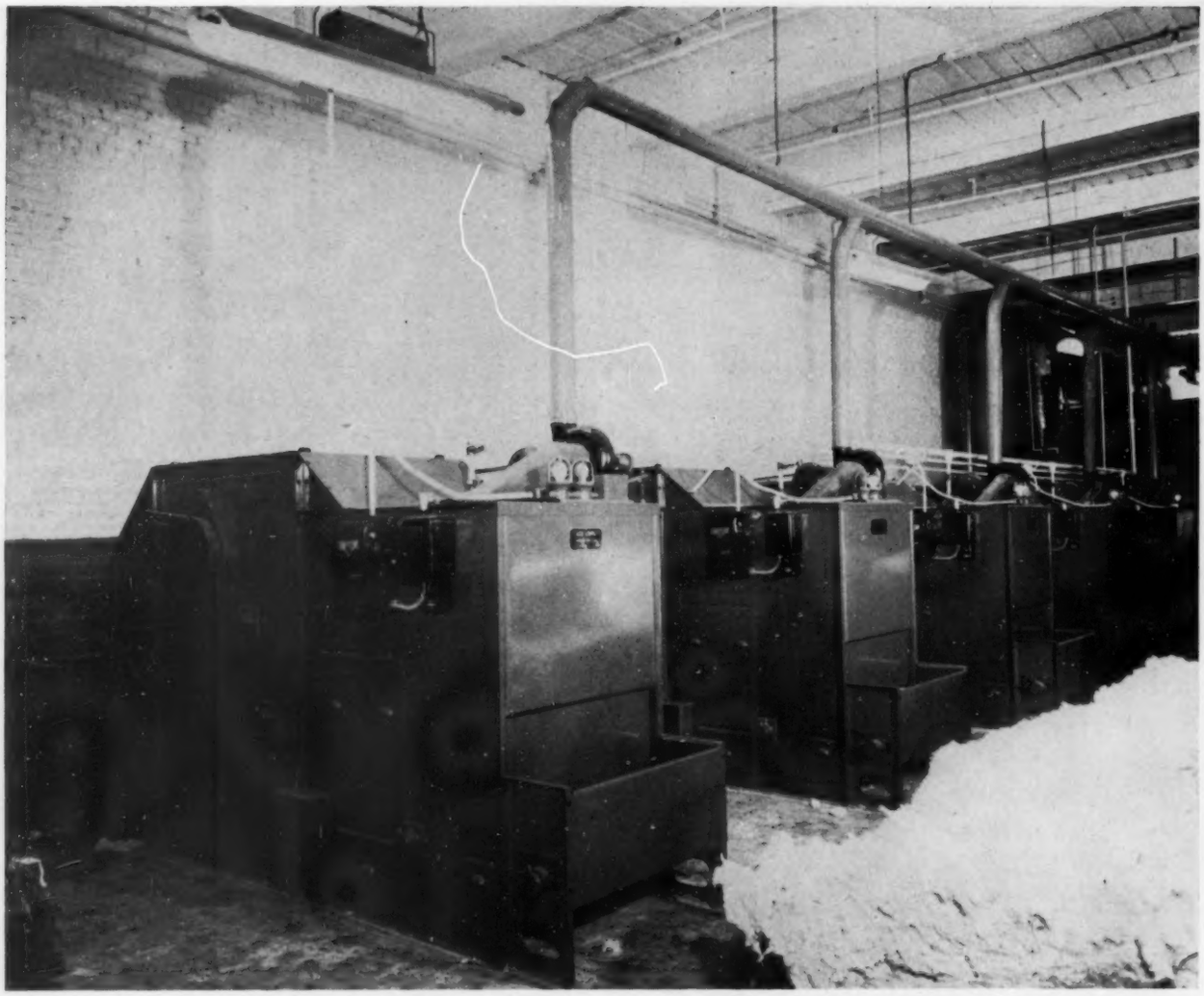
UNIFORMITY — Seed of Dependability

Not only in size or dimension, but in every design, metallurgical and manufacturing detail, New Departure insists upon the most exceptional uniformity.

As a result, the machine designer may select these ball bearings for various duties with the greatest possible assurance that their ultimate performance will completely justify his preconstruction calculations.

NEW DEPARTURE
BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONN. • Branches in DETROIT • CHICAGO • LOS ANGELES and other cities



View in new opener room at Pell City plant. This photo shows the filling side.

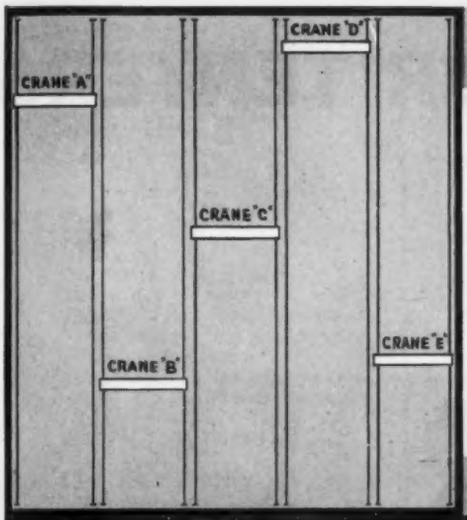
Avondale Gears for the Future

ESPECIALLY appropriate in this special Modernization number, two phases of this company's modernization program are described. Readers have already been briefly posted regarding the development of a non-woven fabric at Avondale (see page 77, December 1947 issue). A feature story on the new pilot plant mentioned here is scheduled to appear in an early issue.

NEW opening room equipment, said by test to remove a higher percentage of waste and to leave less good cotton in the waste, has been installed in the Pell City (Ala.) plant of Avondale Mills. Through the employment of enclosed hoppers, individual dust extractors on each hopper, and the general set-up of the new cleaning sections, there is less dust in the air, and the general working conditions are said to be much better. Also, the pickers and cards can do a better job now, resulting in more even yarn with higher breaking strength.

Other advantages cited are easier and more positive lubrication through the use of ball bearings and pressure fittings.

The line-up before the change was made, consisted of: warp—two lines each, with one bale breaker, two down-stroke beaters, and one additional cleaning machine; filling—one bale breaker, two down-stroke beaters, and two different types of cleaning machines.



Because the beams are conveyed above the looms, note how close together it has been possible to locate the rows of machines in this room. This means more looms in a given floor area.

TRAMRAIL CRANES SIMPLIFY BEAM HANDLING IN WEAVE ROOM

Five crane runways with one 2000-lb. manually-operated crane on each, serve this weave room with approximately 700 looms.

There is no easier, simpler, more efficient way to handle beams in the weave room than by overhead materials handling equipment. One man transports a beam with ease on smooth rolling Cleveland Tramrail cranes.

Regardless of how closely spaced are the looms, beams can be conveyed, placed into or taken out of them quickly and safely. Only space enough for the operator to walk in is required.

Inexpensive hand propelled cranes have proven admirable for this service. The equipment requires practically no maintenance. It is easy to install and can usually be erected without hindering production.

Let Cleveland Tramrail engineers give you the details. It may be possible to install more looms in your present floor areas as well as make your beam handling more efficient.

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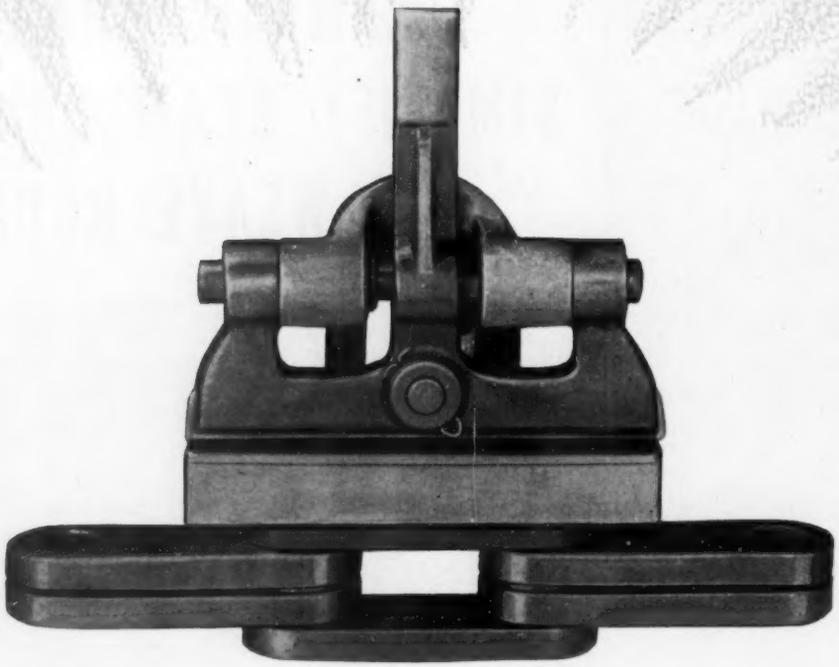
BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
2864 EAST 287TH ST. WICKLIFFE, OHIO

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

THE GOLDEN AGE FOR TENTERS



Here at Finishing Machine Headquarters we know an important new development when we see one . . . and take it from us the new Butterworth "43" Chain ushers in the golden age for tenters.

Chain Vibration Practically Eliminated

The "43" is the first chain with a 2-inch pitch —runs smoothly and quietly even at high speeds.

No appreciable effect on wearing parts even in hardest service

The "43" is the first hardened steel chain with precision ground surfaces — will outwear several malleable iron chains.

Damaged Clamps can be replaced by removing a single bolt—

The "43" is the first Chain that allows the operator to repair damaged clamps with a few seconds shut-down — saves many a weekend in resharpening tenter chains or repairing breakdowns.

The Butterworth "43" Chain is ready for installation in almost any standard tenter. Conversion parts are carried in stock. Or let us quote price on a new Butterworth Tenter equipped with the remarkable new "43" Chain. Write us today.

Butterworth

H. W. BUTTERWORTH & SONS COMPANY, Phila. 25, Pa.

TEXTILE FINISHING MACHINERY COMPANY DIVISION, Providence, R. I. - 1211 Johnston Bldg., Charlotte, N. C. - W. J. Westaway Co., Hamilton, Ont. - ARGENTINA: Storer & Cia., Buenos Aires - AUSTRALIA: Noel P. Hunt & Co., Ltd., Melbourne - BELGIAN CONGO: Paul Pflieger & Co. BOLIVIA: Schneiter & Cia., Ltda., La Paz - BRAZIL: Cia. Industria e Commercia, Glossop, Sao Paulo e Rio de Janeiro - CHILE: Schneiter & Cia., Ltda., Santiago - COLOMBIA: C. E. Halaby & Co., Medellin - CUBA: Thos. F. Turrull, Havana - ECUADOR: Richard O. Custer, S. A., Quito - FRANCE, Georges Campin, Le Perreux, Seine; Rene Campin, Sceaux, Seine - MEXICO: Slobotzky, S. A., Mexico, D. F. - MIDDLE EAST, MEDITERRANEAN, BALKANS, AUSTRIA, HUNGARY, CZECHOSLOVAKIA, INDIA: Arlind Corporation - NORWAY: Dr. Ing. Otto Falkenberg, Oslo - PERU: Custer & Thommen, Lima - SOUTH AFRICA: Texmaco, Johannesburg - SWEDEN: Elof Hansson, Goteborg - URUGUAY: Storer & Cia., Ltda., Montevideo - VENEZUELA: Herbert Zander & Co., Caracas.

TABLE 1

NEW OPENING ROOM SET-UP

WARP

Eight No. 7 hoppers
Conveyor belt
One condenser
One rake distributor
Three gauge boxes
Three No. 12 lattice openers
Three No. 11 screen sections
Three gauge boxes
Three No. 12 lattice openers
Three No. 11 screen sections

FILLING

Five No. 7 hoppers
Conveyor belt
Condenser
Rake distributor
Two gauge boxes
Two No. 12 lattice openers
Two No. 11 screen sections
Two gauge boxes
Two No. 12 lattice openers
Two No. 11 screen sections

The new opening room, which is in two sections, is lined up as shown in Table 1.

The first line is used for warp stock and the second for filling.

As the equipment used in each section is identical, the following remarks pertain to the warp section only.

The comparative blends of cotton between the old set-up and the present can be figured as shown in Table 2.

TABLE 2

24 bale mix (new)	÷	14 bale mix (old)	=	1.7
8 hoppers (new)	÷	2 aprons (old)	=	4.0
3 lines (new)	÷	2 lines (old)	=	1.5

$1.7 \times 4.0 \times 1.5 = 10.2$ times more blending.

Operation

Inasmuch as the eight hoppers feed three cleaning lines, it might be well to see how this is done. The eight hoppers feed onto a conveyor belt. At the delivery end of this belt the cotton is picked up and delivered to a condenser. This condenser feeds a rake distributor, which in turn feeds the lines of cleaning, each line consisting of the following:

One gauge box, one No. 12 lattice opener one No. 11 screen section, one gauge box, one No. 12 lattice opener, and one No. 11 screen section.

The three lines of cleaning deliver to a conveyor belt, which feeds a suction to carry the cotton to the picker room Gyrator system; this system in turn feeds five 3-beater continuous process pickers.

The old system delivered 1450 lbs. per hour at 100%. The current set up delivers 2130 lbs. per hour at 100%. With eight hoppers feeding this is 266.2 lbs. per hopper per hour. With the three duplicate cleaning lines mentioned, this gives 710 lbs. per line per hour.

Automatic Controls

When the picker hoppers become full, automatic controls stop the conveyor belt from delivering to the picker room suction. The hoppers continue to operate until the gauge boxes in each line of cleaning are full, then they cease operating. When more cotton is needed the system starts operating automatically.

The picture on page 126 shows the filling side of the opening room. Five hoppers feed two lines of cleaning. As can be seen, the hoppers are almost completely enclosed, and each one has a dust removal suction. These exhaust into the dust pit.

With enclosed hoppers there is need of some system to determine when more cotton is needed. Two lights are atop each hopper, one red and one green. As long as there is sufficient cotton in the hopper the red light burns; when more stock is needed, the green light comes on. These hoppers have a spike stripper roll.

The system also has magnetic separators. These, however, are not used as an excuse for carelessness. Only two ties are left on each bale before delivering to the opening room. The buckles are placed in a container as they are removed.

New Pilot Plant

STILL another indication of Avondale's gearing for the future is the establishment in Sylacauga of an experimental pilot plant, designed primarily for the processing of synthetic long staple fibers. Except for primary cleaning equipment, slashing, and warping, the pilot plant is a complete mill. A description and a pictorial presentation of this pilot plant, along with a study of its operation, will appear in an early issue of TEXTILE INDUSTRIES.

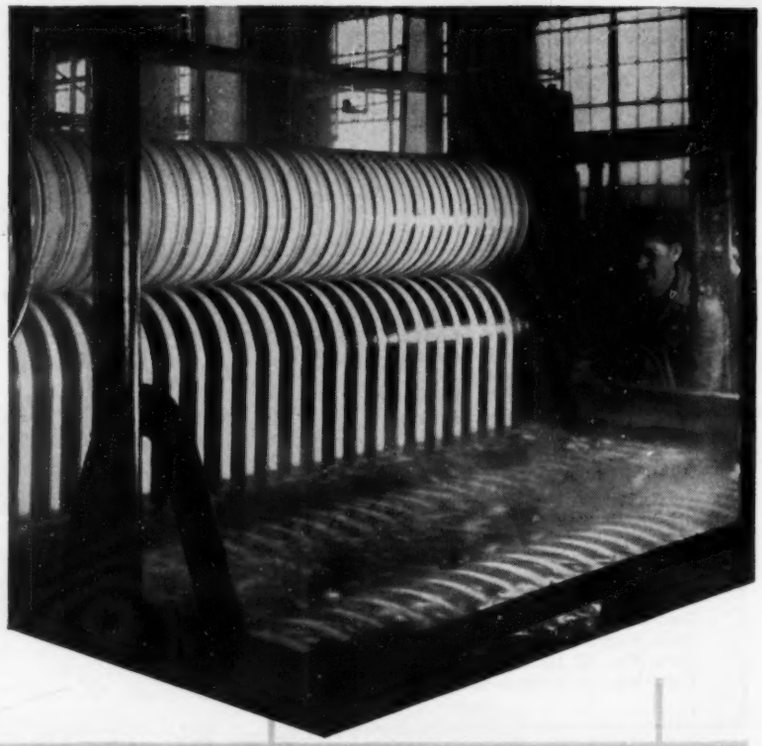
National Advertising Campaign

AS MANY readers of national media know, during 1947 Avondale began a national advertising campaign of a most unusual nature. The advertisements were directed toward the ultimate consumer of the products, but they were built around the theme of "The Human Side of Industry."

Each of the 4-color ads in the *Saturday Evening Post*, except the first three, features the picture of one or more members of Avondale's organization.

The purpose of the series, currently running, is to tell the customers of Avondale Mills something of the accomplishments and ambitions of the 7,000 persons who gain their livelihood from the com-

Dyeing Assistants



Dyeing textiles is a chemical process . . . and the quality of your dyeing can be no finer than the quality of the chemicals you use. Dyers who want to be sure of their choice of dyeing assistants and other basic textile chemicals always—

SPECIFY "GENERAL CHEMICAL"

Select your basic textile chemicals from these General Chemical Products

- Aqua Ammonia
- Acetic Acid
- Hydrofluoric Acid
- Muriatic Acid
- Sulfuric Acid
- Epsom Salt
- Glauber's Salt
- Sodium Bifluoride
- Sodium Bisulfite, Anhydrous
- Sodium Hyposulfite
- Sodium Metasilicate
- Sodium Silicate
- Disodium Phosphate, Anhydrous
- Tetrasodium Pyrophosphate
- Trisodium Phosphate
- Sodium Sulfide
- Oxalic Acid
- Chrome Alum
- Ferric Sulfate *(Iron Copperas Nitrate)*
- Sodium Sulfite, Anhydrous
- Nitre Cake
- Nitric Acid
- Mixed Acid
- Aluminum Sulfate
- Lead Acetate
- Aluminum Chloride, Solution

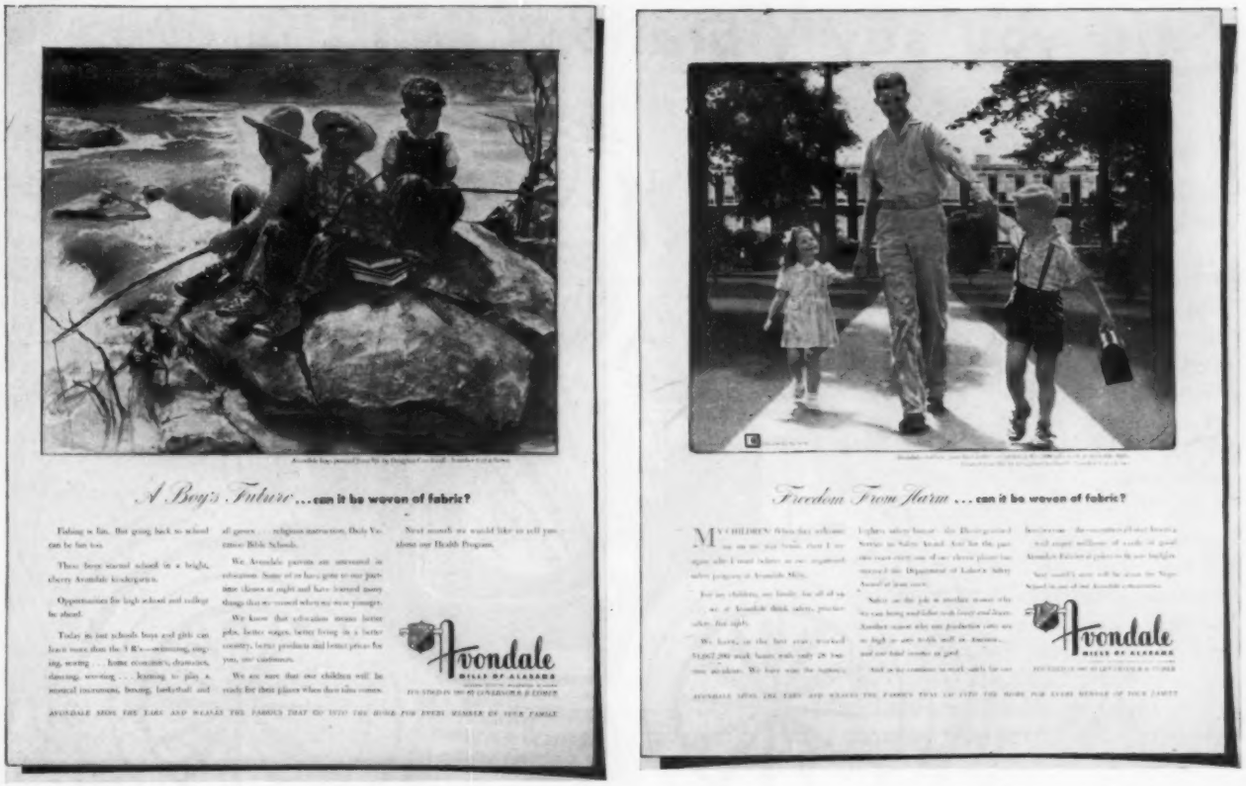
BASIC CHEMICALS

GC

FOR AMERICAN INDUSTRY

GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

Offices: Albany • Atlanta • Baltimore • Birmingham • Boston • Bridgeport • Buffalo Charlotte • Chicago • Cleveland • Denver • Detroit • Houston • Kansas City Los Angeles • Minneapolis • New York • Philadelphia • Pittsburgh • Portland (Ore.) Providence • San Francisco • Seattle • St. Louis • Wenatchee • Yakima (Wash.)
In Wisconsin: General Chemical Company, Inc., Milwaukee, Wis.
In Canada: The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver


A Boy's Future ... can it be woven of fabric?
Avondale
MILLS OF ALABAMA
Freedom From Harm ... can it be woven of fabric?
Avondale
MILLS OF ALABAMA

"The Human Side of the Industry" is the theme around which these and other Avondale advertisements were built.

pany. Designed and directed by Donald Comer, chairman of the board, and executed by John A. Cairns & Co., the advertisements state that these achievements and ambitions, the "partnership with people," has resulted and will further result in a better quality product, produced at a lower unit cost, to be sold at a lower price.

The pictures with the ads were painted by Douglass Crockwell.

Textile Institute Honors American Textile Men

Several of the diplomas awarded this year by the Textile Institute of Manchester, England, have gone to members in North America, according to a recent announcement. The Fellowship Diploma (F.T.I.), which is granted to those who have made a substantial contribution to the advancement of knowledge relating to the textile industry, has been awarded to the following men in the United States:

Werner Von Bergen, who served in the European Theatre of war as a scientific consultant to the U. S. Army, and is at present director of research and laboratories at the Forstmann Woolen Co., Passaic, N. J.

B. R. Roberts, Ph.D., formerly professor at Instanbul University, and now group leader at Monsanto Chemical Co., Dayton, Ohio.

G. Osborne, 81 Webster Road, Weston 93, Mass., who is now treasurer of Jefferson Mills, Inc.

The North American recipients of the Associateship Diploma (A. T. I.), which is granted to those who have proved qualifications and experience in the textile industry, are:

Colin H. Bayley, officer in charge of the textile research laboratories of the National Research Council of Canada at Ottawa.

Mojzen Herz Gutman, who is now manager of the textile department at the Downing Trading Corp., New York, N. Y.

Richard Thomas Kropf, now director of research at Belding Hemingway Corticelli, New York, N. Y.

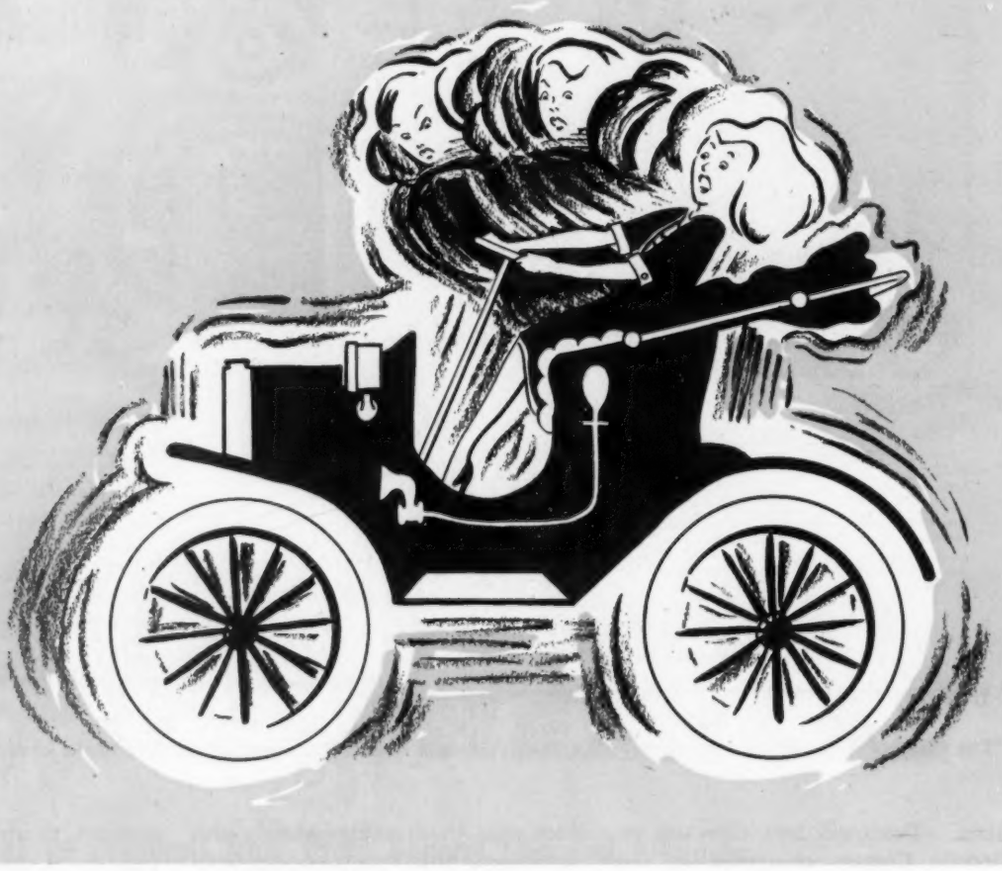
"Fifty Years Isn't So Long" —Say Pepperell Employees

"The Pepperell Sheet," employee publication of Pepperell Manufacturing Company, recently featured the men and women of Pepperell who have worked at the Biddeford, Maine, mill for fifty years and more.

The longest Pepperell record—62 years—is held by Edmond Bergeron. In all that time he never had a doctor and never missed a day's work on account of sickness. Thirteen others share the honors with Mr. Bergeron by having over fifty years of service—eleven men and two women.

Pepperell is deeply proud of and grateful for its employees.

did you say Vibration!



Remember when the auto salesman used to put a glass of water on the front fender to show the elimination of vibration. That was an important milestone in the automotive industry.

The Dynamic Balancer, developed and used exclusively by Jenkins, marks an equally important milestone in the elimination of cylinder vibration. Today, Jenkins Dynamically Balanced Cylinders are famous throughout the textile industry . . . for their ability to deliver smoother performance, improve yarn quality, and reduce overall costs.

JENKINS *Dynamically Balanced* SPINNING CYLINDERS

JENKINS METAL SHOPS *Incorporated*

GASTONIA, NORTH CAROLINA

Redesigning Production Machinery

for Improved Appearance and Safety

By **BURTON D. MORGAN***
Project Engineer
Johnson & Johnson
New Brunswick, N. J.

Description of methods for modifying existing equipment to give a pleasing appearance, easy maintenance, improved safety conditions, as well as good performance.

IN THE DESIGN of automatic production machinery there are three major ways that a machine can be laid out so that the final results will give a beautiful appearance as well as good performance. Due to the wide variety of automatic machinery, these three methods are necessarily very general. However, if the machine is to be designed from scratch, it can probably be placed in one of the following three categories.

1. Outside Frame. This method consists of making what is normally the machine covering heavy enough so that no structural framework is needed. It is in common use on some machine tools and household appliances.

2. Structural frame with Guards. This is the most commonly used machine fabrication method. The structural steel framework is built, all the working parts are added, and the unit is covered with welded sheet metal guards.

3. Cantilever. Machines of this type can be used only in special cases. The machine is designed about an upright section of boiler plate, through which all shafts and drives for working parts protrude. The mechanical mechanisms, drives, chains, sprockets, gears, and cams are on the reverse side of this plate and can consequently be covered with guards.

Fig. 1 is a photograph of an ordinary cloth rewinding machine. Fig. 2 is a photograph of a cloth rewinding machine that was redesigned by utilizing the outside frame method (Method 1). In the design of the new machine, the following steps were taken in order.

1. All working parts necessary to operate the unit were laid out in their most desirable location, without any visible means of support. Although no means of support were included, space was left between all parts to facilitate removal. The parts were also distributed so that there were no

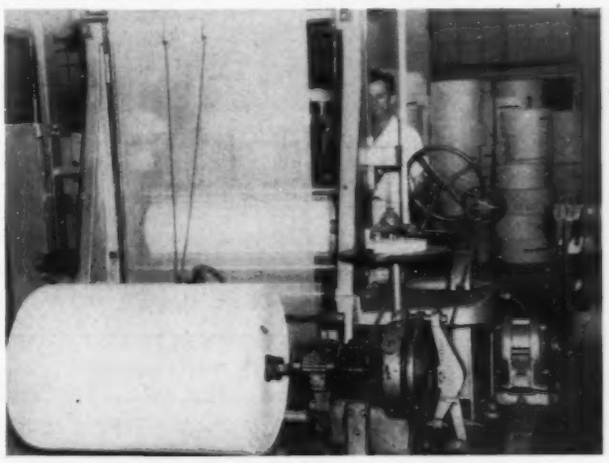


Fig. 1. Cloth rewinder before it was redesigned.

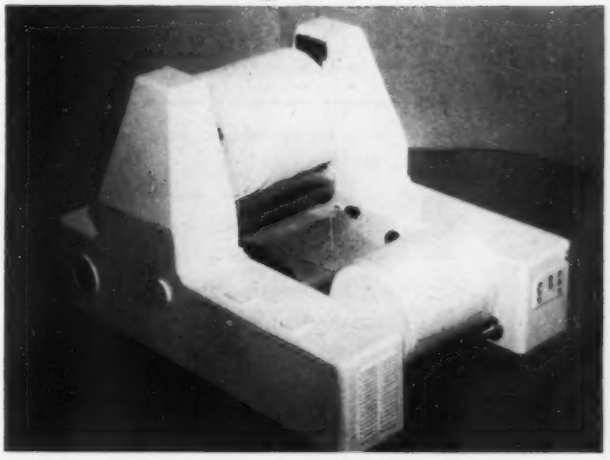


Fig. 2. Redesigned cloth rewinder.

*Data and illustrations were taken from a study submitted to The James F. Lincoln Arc Welding Foundation by the author, in its recent $200,000 Design-for-Progress Award Program for reports on advances and improvements made by the applications of arc welding in design, fabrication, construction and maintenance.

FOR YOUR INFORMATION

STYMER NOW IN NEW CONVENIENT FORM

Those who have already learned the advantages of Monsanto's Stymer in improving acetate sizing will welcome this month's news . . . Stymer is *now available in sodium salt form*. This new formulation, is soluble in water, eliminates the pH control problem and eliminates the use of sodium hydroxide in your plant.

All other advantages of Stymer for acetate sizing are retained:

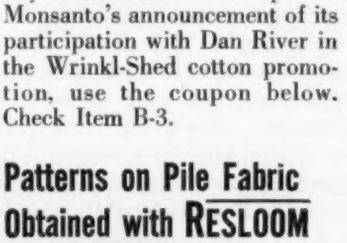
- New toughness at high humidity
- New flexibility at low temperature
- Minimum static in slashing and weaving
- Sticking to dry cans eliminated
- Shedding minimized
- No gelling when cold, no setting up in pipes
- Broken filaments in warp picked up
- May be applied from size bath at any temperature 130° to 160° F.
- Easily washed out when necessary

For more information about Stymer in sodium salt form, mark item B-1 in the coupon opposite.

Wrinkl-Shed Cotton

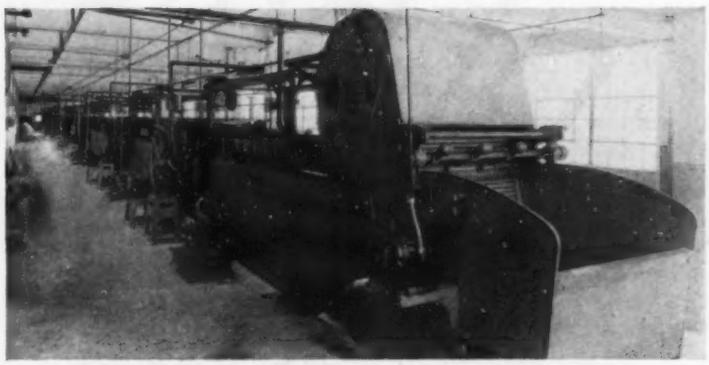
Wrinkl-Shed cotton developed by Dan River Mills with Monsanto's Resloom* Formula C for Wrinkle-Resistant Cotton is now being announced to the consumer in a nation-wide promotion in all leading fashion magazines. Wrinkl-Shed cotton has been developed first in cotton tweeds for resort clothes by Carolyn Schnurer, famous designer. The garments are on sale in 45 Peck & Peck stores in the East and Middle West, and by Jos. Magnin stores on the Pacific Coast. Dan River is expected shortly to present Wrinkl-Shed cottons in ginghams, corded chambray, etc. If you would like to see copies of Monsanto's announcement of its participation with Dan River in the Wrinkl-Shed cotton promotion, use the coupon below. Check Item B-3.

Patterns on Pile Fabric Obtained with RESLOOM and STYMER



By roller printing Resloom and Stymer on a pile fabric, curing and then acid dyeing, we have recently created some extraordinarily beautiful upholstery materials. Because the dyes affect the treated and untreated portions of the fabric unequally, a distinctive, sharp, two-tone effect is gained. The fabric was a wool acetate blend. The hand remained soft and pliable.

For more details about this application check item B-4 on the coupon.



FOR THE TOUGHEST CLEANING JOBS: STED, A NEW DETERGENT

STED is a powerful, new, detergent for efficient industrial scouring. Effective on all types of fibers in practically every washing operation, Sted was developed to solve the toughest textile problems in scouring, washing and cleansing. Strongly recommended for raw wool scouring, Sted also is desirable for backwashing, desizing, kier boiling, hosiery scouring, printed and dyed goods soaping. Superior performance, ease of operation and low cost make Sted a leading economical detergent for large-scale textile washing.

Sted is chemically mild and non-sudsing; yet its cleaning power has been established in practical field tests and in laboratory evaluation under mill conditions. These tests have proved that foam is not necessary for good detergency.

The new product not only removes soil but holds it in suspension to prevent redeposits on the fiber. It is stable to acid or alkali, soluble in hard or soft water. Sted rinses quickly, easily and thoroughly without the formation of foamy scums and the development of odors common with fatty acid derivatives.

So mild it won't damage the most delicate fiber, Sted's non-ionic nature, high potency, non-substantivity and moderate pH values make it particularly effective in wool scouring. Very low grease retention is obtained and the wool is loftier, more open and brighter. No oily film is deposited on the wool as with substantive detergents and bath strengths are not greatly lowered. For full information check B-2 in the coupon.

Tests Prove Washable Wools Are Here

Independent tests conducted for wool shrinkage in men's shirts treated with Resloom W, showed the following results, after five launderings *in an automatic washer:*

Collar	0.8%
Shoulder Gusset	0.0%
Right sleeve	0.4%
Front length	2.7%
Back width	1.0%
Back length	2.5%

This means no change in marked size; there was no change in color, no felting, no stiffening of the "hand." The cycle; two five minute suds at 100° F. neutral soap and four two minute rinses.

The shirts Bloch-Heller's "Game & Lake" brand made from North Star's "Nocturne" fabric used for this test were bought over the counter at Filene's, Boston, and turned over direct to an independent laboratory.

For more information on washable wools check B-5 in the coupon.

Resloom, Stymer ®

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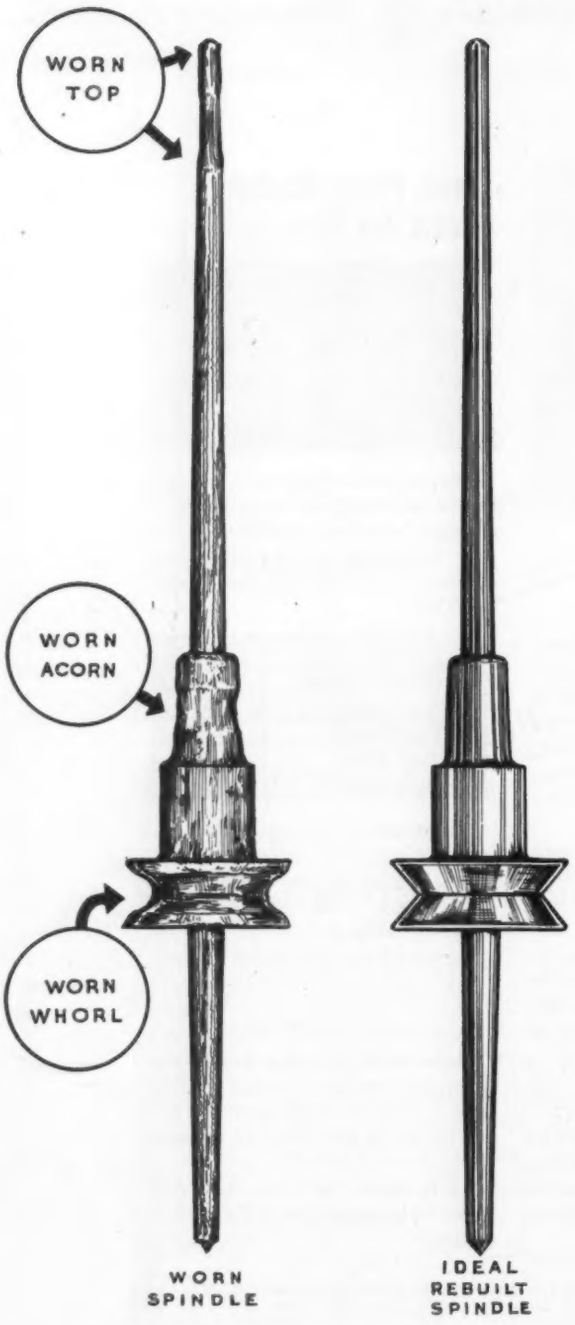

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that's Ideal's achievement in rebuilding spinning spindles. You have the satisfaction of knowing they not only look like new, but are just as good, for each spindle is scientifically rebuilt to mill specifications.

Pictured here is a spinning spindle before and after being rebuilt. One of our engineers will be glad to show you how Ideal's advanced method of rebuilding worn spindles will improve mechanical performance and save you money.

IDEAL MACHINE SHOPS, INC.

BESSEMER CITY, NORTH CAROLINA

24 TH YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS

large clusters of drives, brakes, or other components. In order to keep the working parts decentralized, it was necessary to take the drive across the base of the machine through a rotating shaft before it was extended through V-belts to the anvil roll. The anvil rolls are the two large rolls upon which the roll of cloth rests.

2. The next step was to design a a guard surrounding these working components. This guard was made as simple as possible, in that it was all laid out along straight lines, but it was made large enough to cover everything—with plenty of room to spare.

3. An industrial designer was called in next to make sure that we had selected the right proportions for the machine. In the case of the cloth rewinding machine, his only suggestion was to increase the radius of the corners and to place the vents where they are now located. There are numerous industrial designers who can do this work, and they are usually able to make their recommendations on the spot with a sketch, taking very few minutes.

4. The final shape of the machine was thus fixed, and the metal of the outside framework was made heavy enough to support the working parts of the unit. Since this is a special purpose machine, these shapes could not be died or formed; consequently they were constructed of welded sections of plate. The plate ranges in thickness from ⅛" to ½", depending upon the strength required. The curved edges were put in by bending the metal on a brake. The corners, which were the most difficult part of the construction, were made by taking semi-spherical shapes such as those found on welding pipe caps or other ready-made articles, and cutting them triangular at the base. These semi-spherical shapes were then placed into position and spot welded. After careful checking to make sure that all sections coming to the corner were in line with the radius of the pipe cap, the entire section was filled in with weld metal. This corner was then ground and finished. When a sheet metal man first makes these corners, it requires some time and patience, but once he has mastered the knack of cutting the pipe cap or other shapes correctly it becomes a fairly simple operation.

Wherever it was necessary for the working components to be supported, pads were welded to the framework. Two of these pads were placed on the outside and can be seen on the horizontal surface of the machine in Fig. 2. These pads are used as stiffeners to support an air cylinder which raises and lowers the guide bar.

5. When the frame layout was completed, it was necessary to go over it very carefully to allow room for the removal of any component that might require maintenance. The machine shown in Fig. 2 is equipped with a hydraulic drive which puts a drag on the roll being unwound and takes this power and applies it to the roll being wound. This fairly complex hydraulic unit is mounted on a separate base which slides into the outer shell of the machine. If maintenance is required on the hydraulic unit, it can easily be removed in one piece by removing three fittings and four easily accessible hold-down bolts.

The main drive unit, which is a d-c motor, can also be removed through a panel. The V-belts driving the anvil roll (located on the opposite side of the machine from the d-c drive) are also accessible through panels. If these panels are placed in the design, it is of course necessary to make certain that the structural strength of the framework will still support the required load. It is easy to make all of these maintenance panels flush by welding back-up strips around the inside of the openings.

Advantages. A machine of this type presents a clean, solid appearance which is not obtainable where sheet metal guards are used. This type of design is exceptionally valuable since all of the working parts are enclosed. The result is a greater safety factor and the ability to keep the product clean and free from lubricating oils.

Since all moving parts are enclosed, its operation tends to be quieter, and the noise it does make is not the tinny rattle found on many guarded machines. In many plants, equipment is subject to damage by trucks and abuse by careless employees. When the machine is built with the frame on the outside, a tremendous blow is required to inflict noticeable damage.

Disadvantages. The disadvantage of a design where the framework is on the outside, is increased design time. This increased design time is due to a large extent to the unfamiliarity of designers with this type of construction. Another disadvantage is the inaccessibility of some parts. This inaccessibility, however, can be largely overcome by forethought in the design stage. If units requiring maintenance are mounted so that they can be removed as units, this objection is largely overcome.

Perforating Machine Beautified

The method of beautifying machines by covering operating components and their framework with welded sheet metal guards (Method 2) is valuable in that it can be used on existing machines. An example of this is shown in Figs. 3 and 4 where an unsightly and noisy machine was covered with all-welded sheet metal guards, lined with a sound-absorbing material. The flush panels are clearly illustrated and are made by welding in back-up strips similar to the outside frame rewinding machine.

In beautifying a machine by this method the following steps are usually taken in order.

1. If the machine is to be designed from scratch, the regular design procedure should be followed, and a standard structural framework of welded standard forms used. The practice of decentralizing the working components should be followed insofar as practical, as this aids in later maintenance planning.

2. It is also a good idea to call in an industrial designer on a machine of this type. Sometimes the placing of large sections is of no consequence from a design stand-

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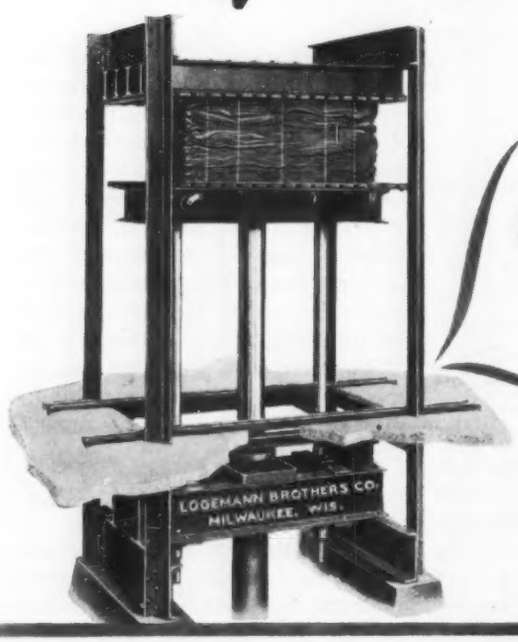

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Open balers for finished goods may be hydraulic or power-driven. Give platen dimensions required, maximum height of pile to be compressed, number of bales per hour, when requesting information on open balers.

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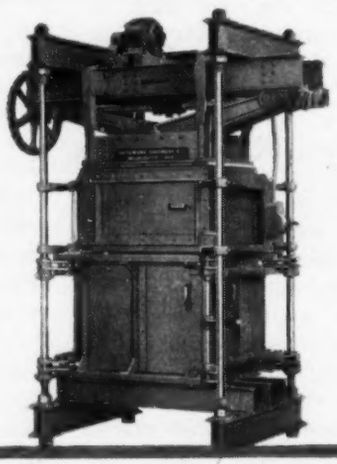
THAT's the best way to get the right answers to low-cost, time-saving baling. During our sixty years of building balers for the textile industry, we've solved many a baling problem for factory owners. Our engineers know how to make baling operations pay their own way in time and labor-savings, in speedier, more reliable handling of bales, in lower maintenance costs. Many Logemann balers have been in profitable operation since the turn of the century — evidence of the ruggedness, durability, and long service life of Logemann baling presses.

In the interests of better baling operations in your factory, find out what Logemann balers can do for you. Tell us what your specific problem is. We'll gladly show you how it can be answered in terms of better bales at lower costs and make a specific recommendation based on your requirements. Write for information today.



Yarn balers may be had with various box dimensions. The 36" long x 24" wide x 60" deep is generally accepted as a standard size.

LOGEMANN BROTHERS CO.

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point but very important from an aesthetic standpoint. The designer should then sketch a guard for covering the machine.

The guard is constructed in the same manner as the outside framework of the machine. The curved sections are formed by a brake, and the semi-spherical corners are welded up from common shapes. In the case of sheet metal guards, we have found it convenient to make small dies which stretch metal for these corners into a semi-spherical shape of our own. The guard is supported by means of 1″ x ¼″ strips which are welded to the frame of the machine. The guards are made in sections so that they can be entirely removed if necessary. Doors are placed at points requiring frequent maintenance.

4. In order to dress up the job, chromium strips and handles are used. These are all outlined by the industrial designer who will go just as far as requested in the final beautification.

Advantages. It is necessary for a machine to have some guards from a safety standpoint. Instead of building and installing numerous small guards of intricate design at various points on the machine, it is oftentimes less expensive to make a complete covering of formed and welded sheet metal. These guards will reduce the noise and do a beautiful job of keeping grease out of the product.

An intangible benefit is derived in making employees take pride in their machines and in the area in which they work. This will reduce plant cleaning expense and will often increase production due only to the employees' attitudes.

Disadvantages. In some cases the covering of a machine makes for more bulk. However, a lot of this objection to the larger piece of equipment is imaginary, in that just as much actual working room is available as was available previously. In many cases, it is more expensive to use a guard of this type than several unfinished guards over the moving parts.

Cantilever Design Recommended Wherever Possible

All machines should be investigated for possible cantilever design (Method 3) before undertaking any other method. A cantilever machine has many distinct advantages. Not only can it be beautified at a very small expense, but it is easy to clean, easy to build, easy to change, and easy to operate. The last advantage is of great importance where continuous web materials are used, because it is only with the cantilever design that the web can be removed or re-inserted at any point in the process without breaking.

The natural limitations to a cantilever design are, of course, the force required in the various operations versus the mass of metal necessary for supporting strength. In designing a cantilever machine the following steps should be taken in order.

1. A schematic layout of all the necessary operations will determine the location of all the parts which are shaft-supported from a vertical section of steel plate. It is normally not necessary to analyze the strength required in this plate as long as a plate of more than sufficient strength is used.

2. Some of the shafts extending through the upright plate will be required to perform heavy duty functions such as punching, cutting, or pressing. To give these heavy duty functions the neces-

Fig. 3. Perforating machine before redesigning.

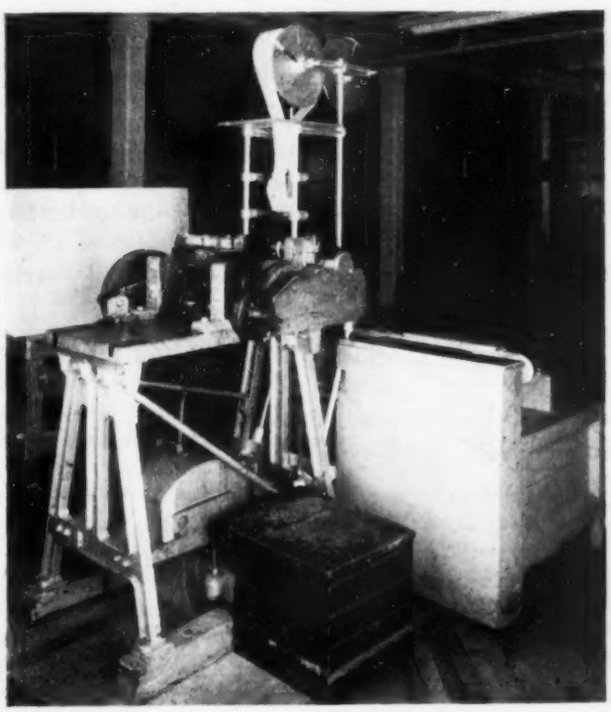
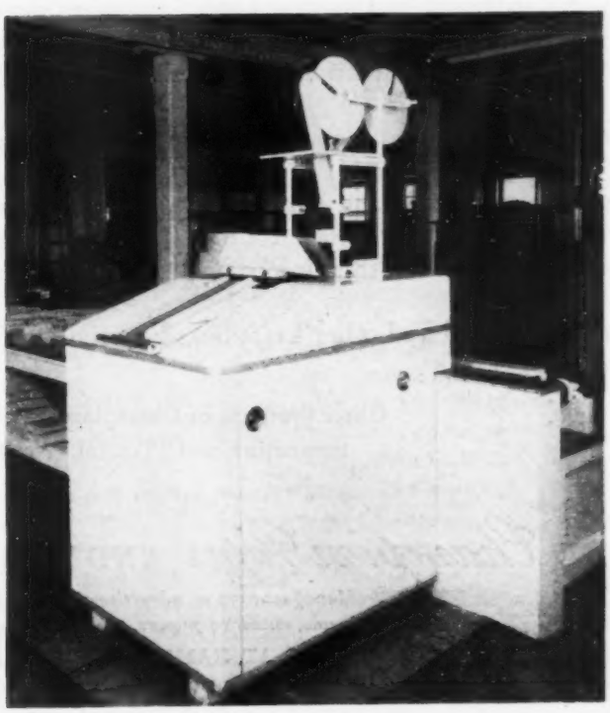


Fig. 4. Same machine after it was redesigned.



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Champion Paper

Champion came to North Carolina forty-two years ago to make good pulp from hardwoods and spruce. Later Champion devised a method of producing strong white pulp from southern pine. Completion of this mission not only sped up the growth of Champion, but opened the entire South to development by the pulp and paper industry. A decade ago Champion constructed another great pulp and paper mill to utilize the vast resources of Texas and serve customers better. In the South today this Company produces great tonnage of pulp, book paper, envelope, tablet writing, pressboard and other kraft board specialties, for use of printers and other businesses everywhere.

Other products of Champion are caustic soda, chestnut tannin extract, turpentine, and "Trostol," combination of resin and fatty acids.

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sary support, it is best to mount a second plate a short distance behind the main upright plate. As the mechanism takes place on the drawing board, sprockets, gears, and cams can be added where needed on the back side.

3. The front side of the upright plate should be kept as clean as possible. All pads, bushings, and support brackets should be placed on the rear, leaving a smooth flat surface containing only protruding shafts on the face of the machine.

4. The last step is to round off the corners of the main plate and build guards extending backwards to cover all of the working parts. These guards are made in the same manner as mentioned in connection with beautification of machinery. Fortunately they are very easy to support and can be removed and work done on the moving parts without getting grease and dirt on the operating side of the unit.

General Recommendations

In building any of these machines there are several things which must be borne in mind from the very beginning.

1. Although the guards are designed with panels it should be made possible to remove any intricate mechanism as a unit for maintenance purposes.

2. If any grease gun lubrication is required it should be made a centralized system. In many cases it will be possible to use sealed ball bearings throughout, which require no lubrication.

3. In many enclosed machines it is a temptation to use sloppy methods of lubricating chains and cams because the guard is expected to hide all.

4. The finish is quite important. Enamel or other paints should never be used. Instead the surface should be sanded, filled, and painted with a good quality lacquer. In many plants there is a tendency to use the same standard colors which have been used for years, even though they may be extremely dull. A light pastel color may be startling at first among the old machines, but it soon becomes unnoticeable in itself and brightens up the room considerably.

Projection of Capacity for the Rayon Industry

Domestic rayon yarn and staple capacity, now estimated to be 1,022,000,000 pounds annually, will show an increase in the next two years to enable the industry to produce a total of 1,175,000,000 pounds, 15 per cent more than at present. This projection of operating capacity for the rayon industry is outlined in the January issue of *Rayon Organon,* published by the Textile Economics Bureau, Inc.

The greatest increase will be accomplished by the acetate division of the industry. By October, 1949, acetate yarn and staple capacity is expected to reach an annual rate of 422,000,000 pounds, 32 per cent more than the current level. Viscose+cupra yarn and staple capacity in the next two years is projected to 753,000,000 pounds, an increase of 7 per cent over the present output.

Although two new rayon plants will come into production, a large part of the increase in capacity in the next two years will be the result of extension and refurbishing of existing plants and equipment.

By late 1949, the annual capacity of viscose+cupra filament rayon yarn will reach a total of 575,000,000 pounds, a 10 per cent increase over the 522,000,000 pound level of November 1947. Of this projected 53,000,000 pound increase, 70 per cent will be high tenacity viscose yarn and 30 per cent intermediate plus regular tenacity viscose+cupra yarn.

The *Organon* points out that it is significant that the November 1947 capacity of viscose+cupra yarn at 129 denier was 4 per cent above the previous peak level of 277,000,000 at 132 denier reached in 1943. Moreover, the current rate is 8 per cent over the prewar 1941 high point in textile yarn production of 268,000,000 pounds. It is a noteworthy accomplishment that the high tenacity viscose program has been carried out with no reduction in the output of viscose+cupra textile yarn.

Advisory Committee Named for Cotton Promotion Program

Appointment of a 47-member advisory committee to assist in the planning of the cotton industry's 1948 promotion and research program was announced recently by Oscar Johnston, president of the National Cotton Council.

Made up of leaders of the cotton and allied industries, the advisory committee will participate in program planning in the fields of production and marketing, utilization research, foreign trade, and sales promotion.

Among those included on the list of advisory committee appointments given by Mr. Johnston are: W. D. Anderson, chairman of the board, Bibb Manufacturing Company, Macon, Ga.; Fuller E. Callaway, Jr., of LaGrange, Ga.; C. A. Cannon, president, Cannon Mills Company, Kannapolis, N. C.; Donald Comer, chairman of the board, Avondale Mills, Birmingham, Ala.; and Dr. C. T. Murchison, president, Cotton-Textile Institute, New York, New York.

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...WITH ANY YARN—

THE *KIDDE* TENSION COMPENSATOR

automatically maintains constant output tension —at any desired value from 15 to 120 grams— regardless of changes in yarn coefficient of friction, input tension, yarn speed, or variations in mill temperature and humidity.

Just set the calibrated dial of the Compensator —lock it in position—and the ball-bearing compensating disc will keep tension constant. In months of actual mill tests on all types of yarns, greatest variation from set tension was only 2 grams!

The *Kidde* Compensator is precision built for accurate, lasting performance. Heat-treated stainless steel balls give friction-free compensation. Guide most subject to wear is made of sapphire. Calibrating tension spring is fatigue-resisting beryllium copper.

REPRESENTATIVE APPLICATIONS

of the *Kidde* Tension Compensator include:

1. Filling Winding. Number of shiners and shell-offs is cut down, boosting loom efficiency. More yarn can be wound on bobbin—delicate yarns can be wound at higher speeds.

2. Plying of coarse yarns. Compensator permits magazine creeling—prevents corkscrews or uneven plying.

3. Rubber Warping. Compensator can be set to take out all of the stretch.

MAIL THE COUPON *for full details*

Walter Kidde & Company, Inc.
290 Main Street, Belleville 9, N. J.
Gentlemen:
Please send me information on the *Kidde* Tension Compensator.
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The Fibrograph Measures Staple Length

APPEARING on page 116 of the December 1941 issue of "Cotton," now TEXTILE INDUSTRIES, was a description of a new machine developed by Dr. K. L. Hertel of the University of Tennessee Fiber Research Laboratory, Knoxville, Tenn., for accurately measuring and recording the fiber lengths in a sample of cotton.

At a recent meeting of Committee D-13 of the American Society for Testing Materials in Philadelphia, this machine was discussed in considerable detail. In view of the interest displayed in this instrument by mill men attending that meeting, Fulton Sylphon Division of Robertshaw-Fulton Controls Co., Knoxville, Tenn., manufacturers of the Fibrograph, were requested to provide current data on the instrument for the benefit of our readers. This information is presented herewith.

This instrument employs light-sensitive photo tubes for scanning samples of parallel cotton fibers, and simultaneously traces a length-frequency curve. The geometrical properties of the resulting curve make it possible to readily and quickly determine various average length intervals, variance and co-efficient of variation.

To test the relation between the absolute lengths of fibers and those ascertained by the new instrument, three cottons were carefully sampled and more than 3,000 fibers from each measured by the projection method and by using the Fibrograph. Results of this test which was made at the University of Tennessee, are shown in Table I.

As will be noted in Table I, the Fibrograph length multiplied, on the average, by a factor of 1.19 gives absolute length of fibers.

Another test of accuracy, made at the University of Tennessee, is the comparison shown in Table II of measurements obtained by the Fibrograph and those determined by an expert classer.

TABLE I

MATERIAL MEASURED	METHOD OF MEASUREMENT		
	Projection	Fibrograph	Ratio
7/8-inch Upland			
Mean length in 1/32-inch	26.6	22.3	1.19
Upper half, mean length in 1/32-inch	32.9	27.4	1.20
1 3/16-inch Upland			
Mean length in 1/32-inch	33.2	28.4	1.17
Upper half, mean length in 1/32-inch	43.9	36.6	1.20
Sea Island			
Mean length in 1/32-inch	44.5	37.4	1.19
Upper half, mean length in 1/32-inch	61.8	51.8	1.19

TABLE II

VARIETY	FIBROGRAPH	CLASSER
	Upper-half mean length in 1/32-in.	Staple length in 1/32-inch
Acala 44-5	33.6	32.8
Clevewilt	34.2	34.4
Cokers 100	36.2	35.0
Deltapine 10	32.9	33.4
Deltapine 11A	34.4	33.8
Rowden 4046	32.1	31.6
Stoneville 2A	33.9	33.8
Stoneville 2B	35.9	35.4
Trice W2-1-2	30.2	31.0
Washington	35.6	35.0
Grand mean	33.9	33.6

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PREMIER CREPE SOAKING OIL AND WARP SIZE SOFTENER

The rayon industry—one of the *most modern* of industries — turns naturally to *modern* machines, *modern* methods and *modern* processing materials to help increase volume, enhance quality and lower production costs — turns also to NOPCO 1111, acknowledged Standard of the Industry. Why?

Because today NOPCO 1111 means—as it has meant for more than a quarter of a century—many unique advantages for the Rayon Throwsters and Weavers throughout the world.

IT MEANS . . . unsurpassed softness and lubricity, higher winding efficiency, reduced ends down, fewer knots in yarn, more nearly perfect finished goods . . . controlled pebble . . . easy removal during boil-off . . . no volatilization in drying . . . complete freedom from oxidation and rancidity . . . plus other advantages that make NOPCO 1111—*now* as *always*—the premier product of its kind.

Read the two booklets widely accepted by the Rayon Industry for basic facts—"Important Points Regarding Rayon Warp Sizing" and "NOPCO 1111—Soaking Oil for Rayon Crepe Yarns". These valuable NOPCO booklets are available upon request.

NOPCO CHEMICAL COMPANY, Harrison, N.J.

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NOPCO EVOLVED THROUGH RESEARCH

National Cotton Council Meets in Atlanta

THE COTTON industry knows where it stands today, where it needs to go, and how to get there, Oscar Johnston told the assembled delegates at the tenth annual meeting of the National Cotton Council, Atlanta. Mr. Johnston, president of the Council, keynoted the three-day meeting, January 21-23, by emphasizing that "we know definitely the effect of price on consumption—where it is insignificant, and where it is vital—and we know what we must do to make sure that our costs are competitive."

The speaker cited further information available to the industry on where sales pressure can multiply cotton's markets, and where it is hopeless until adjustments in quality or cost have been made.

An enviable start has already been made along paths which have been plainly marked, reported Mr. Johnston, and as rapidly as the certainty of cotton's needs has been established, the industry has instituted specific programs aimed intelligently at their fulfillment.

Industry Supports Research and Promotion

According to information supplied by Harold A. Young, vice-president of the Council, every branch of the cotton industry is supporting the Council's promotion and research program more solidly than ever before. Slightly more than 65 per cent of the active spindles in the Cotton Belt spinning mills already are covered by agreements to support the 1948 industry-wide program. Further support on these programs is given by the cottonseed crushing industry, compresses and warehouses, cotton gins, and cotton merchants.

Problems calling for immediate research projects in order for cotton to remain competitive in major markets were pointed out in recommendations by Dr. Leonard Smith, director of the utilization research division of the Council. He suggested an immediate expansion of research to improve the crease resistance, drape, and luster of cotton fabrics for application in household and apparel uses.

Another pressing research need of the cotton industry, according to Dr. Smith, lies in the field of chemical modification of the cotton fiber. He mentioned special treatments to which cotton is subjected for the purpose of imparting specific qualities, such as water repellency, fire-proofness, and mildew resistance. Dr. Smith cited what he termed a tremendous advantage to have resin molecules linked directly to the cellulose molecules of the cotton fiber, further stating that such chemical modifications are probably feasible and should present interesting problems to a number of research laboratories.

The Council's program for 1948 will emphasize (1) Surveys of cotton's markets for the purpose of developing accurate data regarding the importance of the different research problems needing investigation; (2) technical surveys to develop additional research programs needing investigation under the Research and Marketing Act, and (3) laboratory contact work to stimulate the interest of the various research laboratories in cotton's over-all research program for technical service to cotton's customers, with the view of expanding cotton's competitive ability.

HIGHLIGHT of the annual Council meeting was the address by Secretary of State George C. Marshall. The Secretary told Council members, including growers and spinners, of their parts in the proposed European Recovery Plan (the Marshall Plan).

Sacrifices by American groups will be necessary, he explained, especially affecting the grower in that farm machinery will be exported to Europe, causing a shortage of needed equipment in this country. The American spinner has been considered in the proposed plan, and it is expected that for the most part American spinner needs will be fulfilled. However, more than ten million bales of cotton will be shipped to Europe during the four and a quarter years of the Plan.

Should the Plan be adopted, three million bales will go to Europe by 1949, he advised.

Discussing mechanized cotton production, Claude L. Welch of the Council said that it will bring new savings to Cotton Belt farmers, both in cash and labor. Savings ranging from $6.60 per acre for the high plains area of Texas to $36.75 for the coastal plains of the Carolinas are possible through adoption of fully mechanized methods of cotton farming, according to Mr. Welch. The foregoing figures disregard machinery operation cost. Smaller savings in Texas were explained in that this region already has adopted advanced mechanization methods.

Oscar Johnston, who has been president of the Council since its beginning, was elevated to chairman of the board upon his resignation as president. At the final meeting, glowing tribute was paid the outgoing president for his service and untiring efforts in bringing all branches of cotton interests together in the Council. Mr. Johnston was succeeded as president by Harold A. Young, cotton producer of North Little Rock, Ark.

A foundation was established, known as the Oscar Johnston Foundation, to increase the consumption of American grown cotton, the first contribution coming from the Council.

The board of directors includes representatives of producers, ginners, warehousemen, merchants, crushers, and spinners. Spinner delegates for 1948 are Hugh M. Comer, Sylacauga, Ala.; Chas. C. Hertwig, Macon, Ga.; Ernest Rees, Fayetteville, N. C.; Fred W. Symmes, Greenville, S. C.; and A. K. Winget, Albemarle, N. C.

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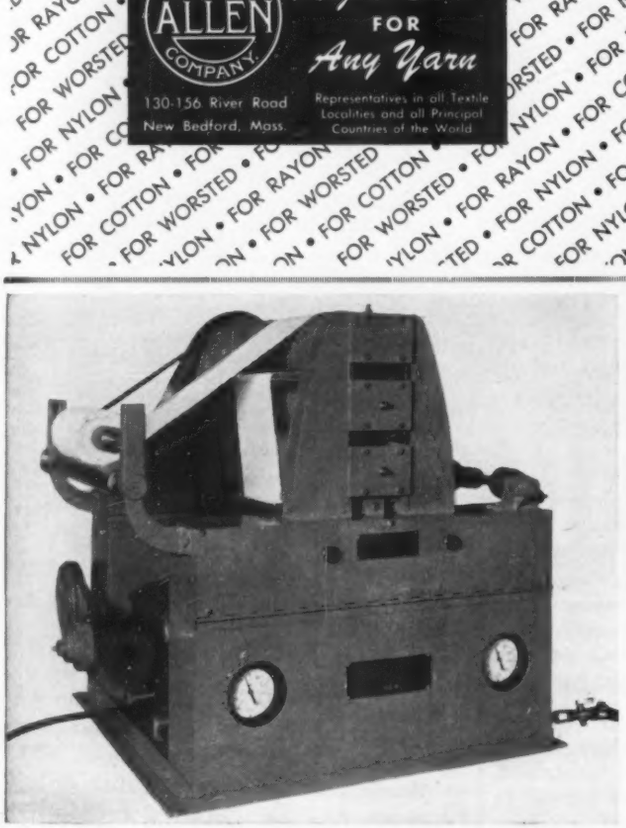

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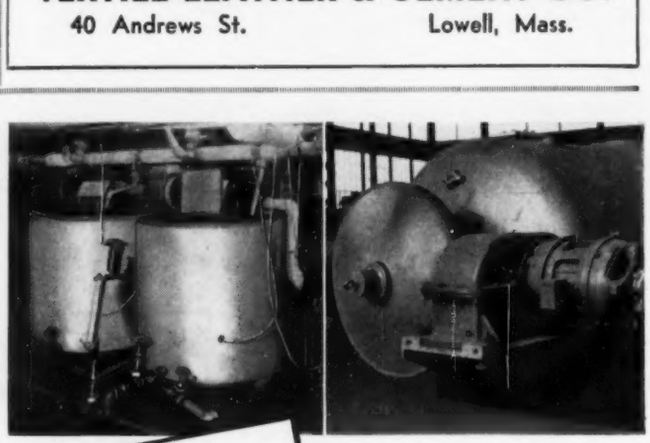

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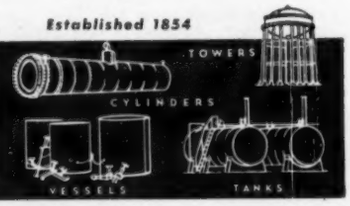


How OTHER MEN Manage

Method for Pinning Loose Shuttle Spurs

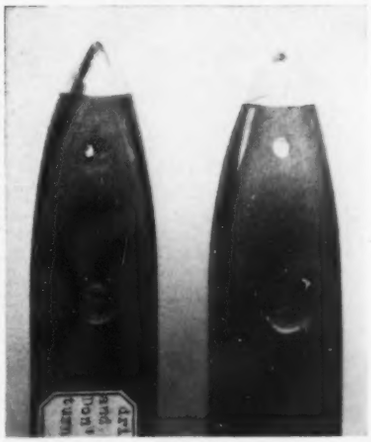
The winning entry for the "kink" contest as announced in the November and December issues, and ending January 10, was submitted by W. E. Wenrich of Berwick, Pa.

The accompanying article is Mr. Wenrich's entry. It describes a method for pinning loose shuttle spurs.

Another contest begins this month. For details, see page 157 of this issue.

ANY LOOM is likely to knock a spur loose now and then, and the most careful and experienced fixer must replace shuttles occasionally, especially during a time when he has many loom breakdowns. Basically, there are several reasons that could cause shuttle spurs to become loose. Too much pick, insufficient check, pickers too hard, improper boxing of the shuttle, shuttles in storage too long prior to use, and many other reasons cause loose spurs. Failure to attend to any of the foregoing details can result in costly shuttle damage.

On Draper looms, large loop-picker holes have a tendency to grip the shuttle spur on the pick, and the spur is gradually worked loose. On Crompton & Knowles looms, a hard picker on the drop box side is a frequent source of loose spurs because the incoming shuttle is not cushioned sufficiently to give a soft check.



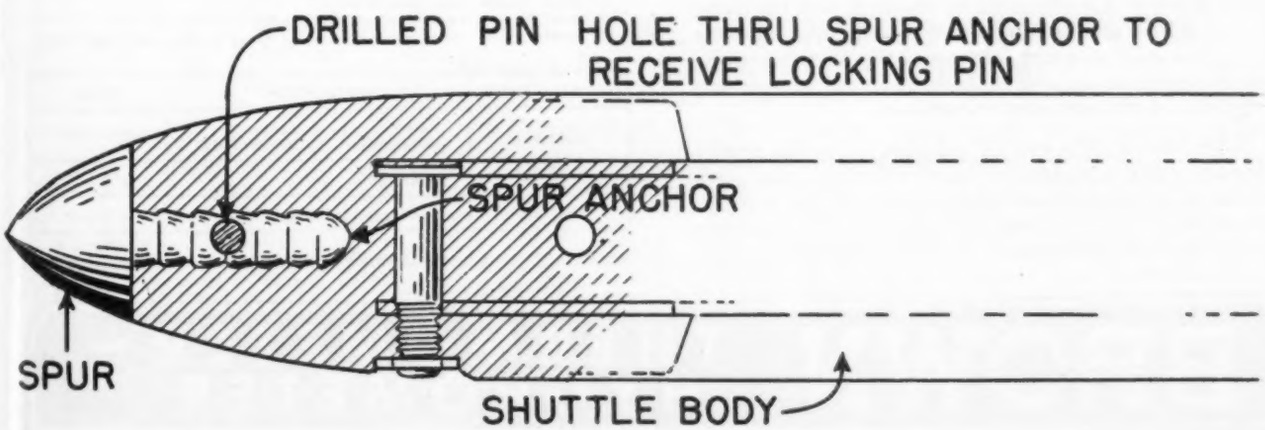
Note spur on left has turned and shoulder extends over body of shuttle. Hole has been drilled and spur pinned in place without returning to original position. Shuttle on the right has been pinned and polished smooth.

There are so many varieties of shuttles that fixers occasionally can be confused by frequent changes of shuttles—a practice that is common in some plants where a search is on for better shuttles. The good points on certain shuttles are often obscured because the spurs become loose, and not infrequently, foremen and fixers are put on the spot to account for shuttle failures.

Shuttle costs may become excessive if frequent replacements are made. If a shuttle gives up to six months of satisfactory service on a high speed automatic loom, it has given good service and may be considered expendable.

Pinning the spurs will keep shuttles running until other damage necessitates removal. One shuttle (see photo) shows spur having loosened and turned. The sharp metal edges or shims will rip the warp ends out in small bunches if allowed to run. Do not attempt to turn the spur back to original position, but drill a 7/64 inch hole through the shuttle front approximately ¾ inch in back of the shim, so that the hole is in the center of the spur shank. Dress a short length of harness mount wire to fit into the hole snugly. Cut the wire to form the pin so it can be driven into the hole from the front side of the shuttle. The hole should be drilled through the spur shank but it should stop after passing through the metal shank. The pin

Diagram showing location of pin hole in shuttle spur anchor to receive locking pin.



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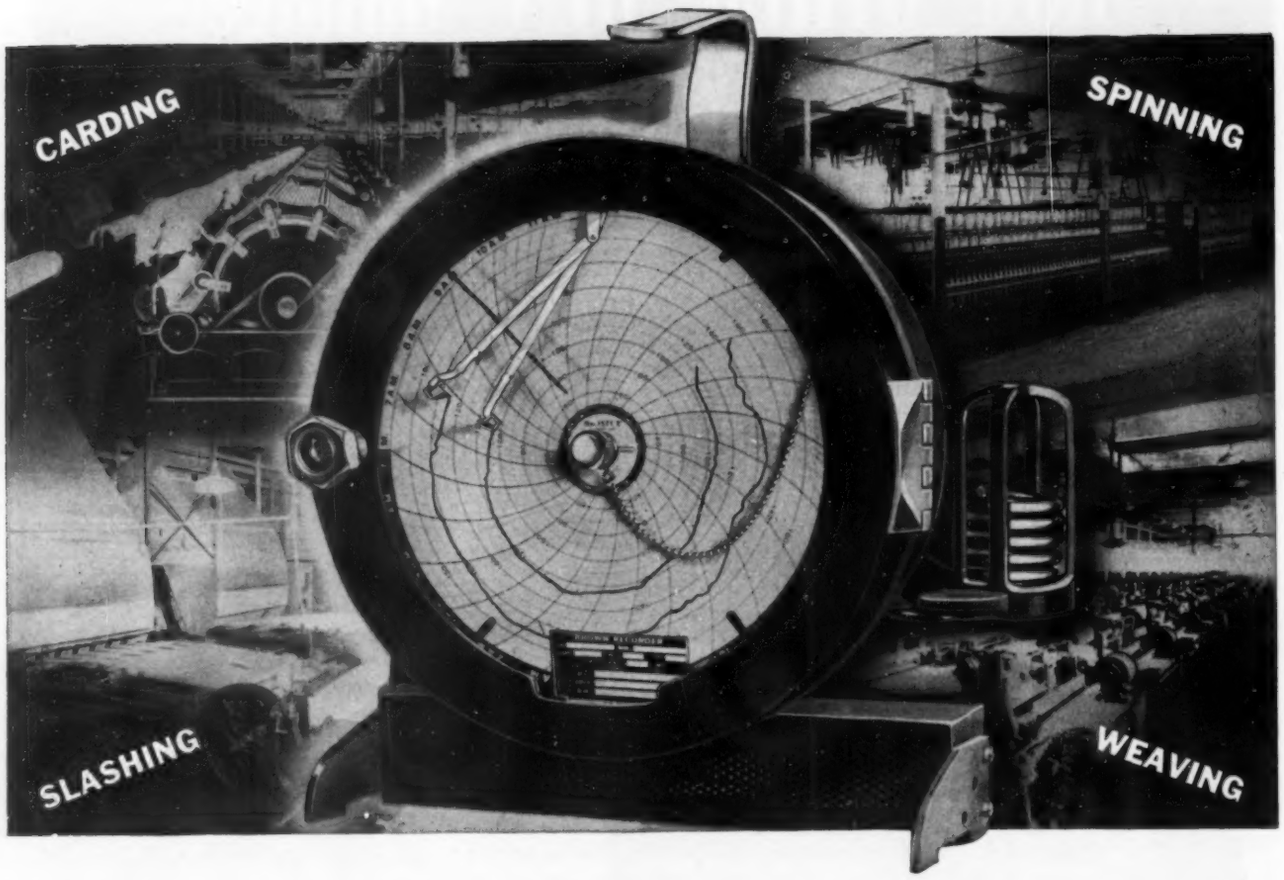

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is driven through the shank and partly into the wood or fiber on the opposite side of the shank. Countersink the pin slightly beneath the fiber or wood surface. Tap the fiber with a small ball-peen hammer to crush the fiber over the pin to prevent it from coming out.

The pin when driven into a tight fit, will prevent the spur from turning or becoming loose. Dress the sharp spur edges and shim edges on the sanding disc, and polish as shown on right.

If the section frequently knocks the spurs loose, it is best to pin the spurs on new shuttles before using them. Otherwise, if spurs should come loose on old shuttles, merely pin them firmly in position as shown, and the shuttle will give additional service.

H. E. WENRICH
Berwick, Pa.

Floor Preservation

EDITOR TEXTILE INDUSTRIES:

Several mill officials from various textile enterprises have visited our plant to see and learn more about a floor treatment and preserving system that we have been using for several years. In order to be of help to those men who are having floor trouble, I would like to describe our method.

We learned many years ago that failure to remove scrubbing water would gradually rot the floor. We decided to give the floor a preliminary smoothing or sanding treatment, following with an application of floor oil.

This was the system that we had been using on the floors of village houses, so we decided it would work as well in the mill. It has been highly satisfactory, and once you have gone over every square foot of a floor with a thorough treatment, this will last for about four years with the exception of the sections on which there is very heavy traffic.

There is now a patented system for treating floors which is similar to ours. This system requires machines for the work, and we are using it in one of our plants.

CONTRIBUTOR No. 8037

One vs. Two Flange Rings

Question Briefed: *Which is better for spinning 30s and 40s yarn—a one or two flange ring?* (CONTRIBUTOR No. 7966, *August*, 1947)

EDITOR TEXTILE INDUSTRIES:

On page 131 of the August issue of TEXTILE INDUSTRIES, CONTRIBUTOR No. 7966 asks which is better for spinning 30s and 40s yarn—a one or two flange ring. In the September issue a number of replies appeared.

When I first read this question my impression was that he was referring to single or double flange rings, and apparently a number of other readers made the same interpretation, judging by their answers. A well-known traveler representative happened to come by the mill about this time, and I discussed the question with him. He said that he understood the inquirer was referring to *No. one* or *No. two*-flange rings. If I remember correctly the width of a No. 1 flange measures 4/32", and the No. 2 flange measures 5/32".

In the event the foregoing interpretation is correct, he would probably benefit by using the No. 1 flange ring for 30s and finer because he could use a traveler of smaller diameter. Frankly, I cannot see that it would make any difference whether the rings were single or double flange. When turning a double flange ring, even for use in spinning coarse yarns, the flange which has not been in use must be polished by some means before using, or an excessive number of ends will come down.

CONTRIBUTOR No. 8033

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EDITOR TEXTILE INDUSTRIES:

I may be mistaken in assuming that CONTRIBUTOR No. 7966 intended to word his question as follows: "Which is better for spinning 30s and 40s yarn, a ring with a No. 1 flange or a ring with a No. 2 flange?" If the question were intended that way, I would answer that he would do well to choose a No. 1 flange. We spin counts from 10s to 100s and over on a No. 1 flange, and we would not consider using a No. 2 flange because of our experience with it.

A No. 1 flange is preferred for large size rings (from 1¾" up), especially for fine yarn numbers. A No. 2 flange ring would be appropriate for rings smaller than 1¾" (if coarse counts have to be run on them).

Some confusion is possible when reference is made to ring flanges by numbers. We speak of No. 1, 2, 3, 4, etc., flange rings, but any of these numbers may be issued as single flange or double flange rings. The numbers refer to the width of the traveler rim. A single flange ring has only one traveler rim, and when this single rim is worn out, the ring is no good. A double flange ring has two traveler rings and will last twice as long as a single flange ring of the same diameter because the ring may be inverted when one side is worn out.

In answer to the question, CONTRIBUTOR No. 7967 mentioned that he uses double flange rings for 30s and 40s, but he failed to say whether he used single or double flange rings. The other contributors stated that they use single flange—one flange and double flange rings, which should have been mentioned along with the number of the flange. When rings are ordered, it is necessary to specify what number flange is desired, and whether the rings should be reversible or non-reversible.

CONTRIBUTOR No. 8032

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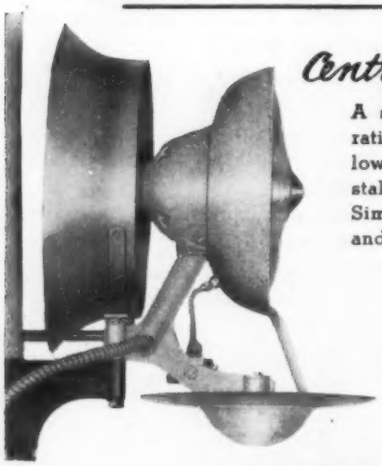

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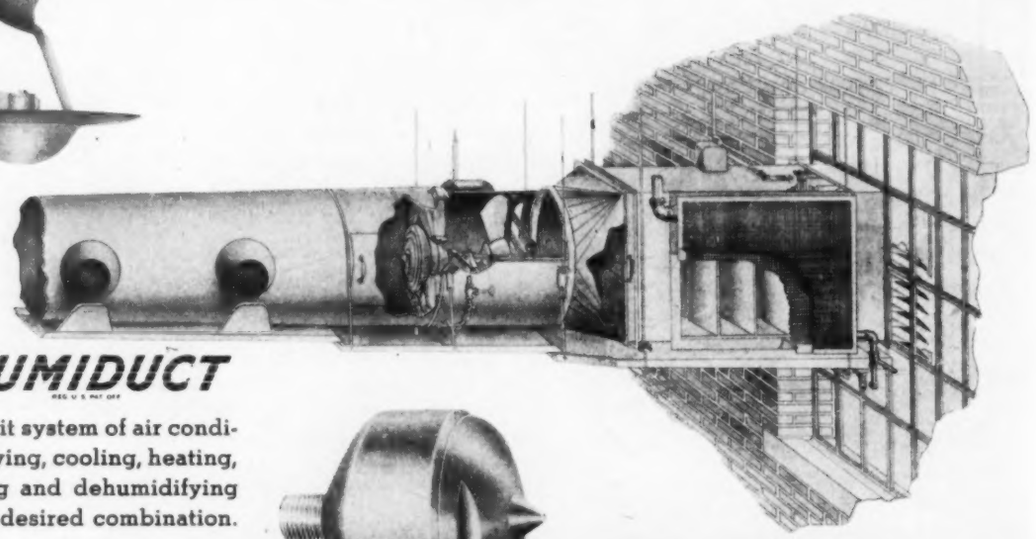

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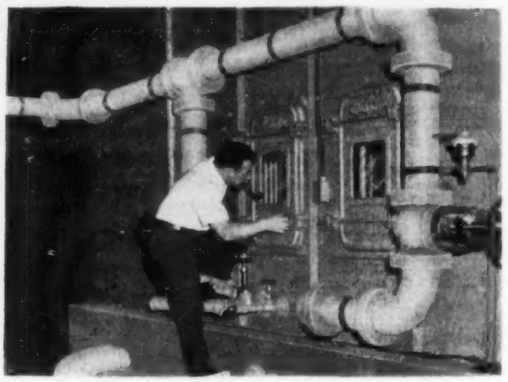

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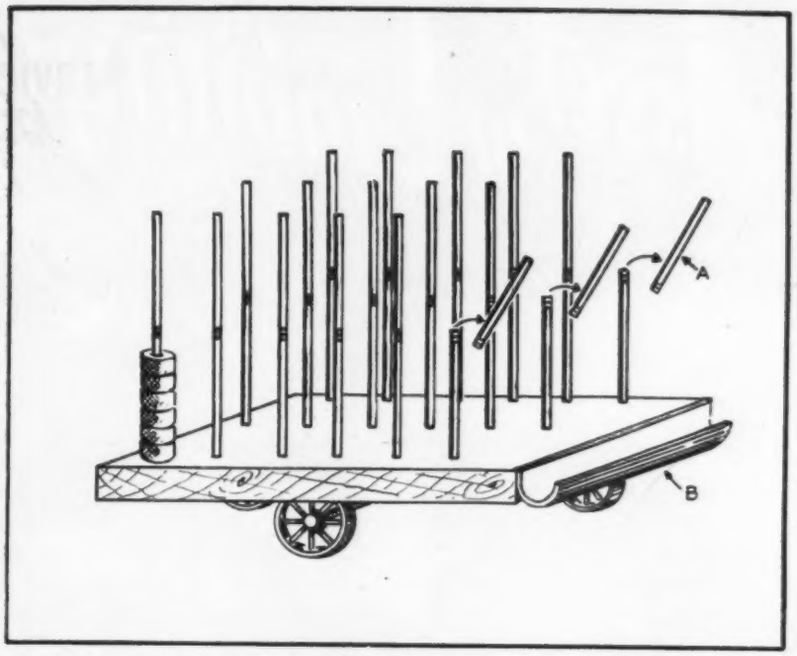

A storage truck equipped with segmented storage spindles.

Storage Trucks for B-C Cheeses

EDITOR TEXTILE INDUSTRIES:

Storage space for Barber-Colman spooler cheeses poses a problem for many mills. One solution to the storage problem is shown in the accompanying illustration. This truck has 18 spindles arranged three across and six lengthwise. Each spindle is long enough to accommodate 12 cheeses, so that the truck has a capacity of 216 cheeses.

The top half of each spindle, shown at (A), is made to telescope into the bottom half for a short distance, and thus can be removed when not in use. The rack (B) is for storing the top halves of the spindles.

No tables or shelves are required, and the trucks do not require any more floor area than the tridents stored on tables. They will increase the storage capacity of the available floor area by 140%. The trucks when equipped with ball-bearing wheels, can easily be handled by women operatives.

The cheeses are removed from the spooler tridents and are placed on the spindles of the truck. The truck is then placed in the storage area until the yarn is needed. When cheeses are used on the Barber-Colman warper creel, the loaded truck is pushed to the creel; the upper layers of cheeses are placed on the upper spindles of the creel. After the telescoped portion (A) of the truck spindle is uncovered, the upper section of the spindle is removed and placed in the rack (B). The lower layers of cheeses are then creeled on the lower spindles of the warper creel. The empty starters are removed from the warper creel and are placed in a separate box. A similar procedure is followed when the cheeses are used on package dyeing machines and in ring-twister creels.

These trucks can easily be constructed by any competent mill mechanic. They will be found particularly advantageous when storage space is at a premium, and the yarn cannot be retained on the original tridents.

CONTRIBUTOR No. 8019

Discussion on "Sooty" Bobbins

Question Briefed: *During the fall and winter of every year we are troubled with black "sooty" spinning bobbins. Only the bottom half of the bobbins are soiled. I would appreciate any assistance that others might contribute.* (CONTRIBUTOR No. 8023, *December* 1947)

EDITOR TEXTILE INDUSTRIES:

We are of the opinion that the difficulty CONTRIBUTOR No. 8023 is having in regard to "sooty" bobbins is due to the soot which comes out of the atmosphere. This comes in from the outside through doors and windows.

The only way to eliminate this is to avoid having any outside ventilation. This can be done only by having an air-conditioned plant. There is enough inside vacuum pressure to keep soot off the bobbins whenever you have an air conditioning system.

CONTRIBUTOR No. 8026

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EDITOR TEXTILE INDUSTRIES:

It is our experience that yarn mills are not bothered with the "sooty" looking bobbins in the summer time, but it usually begins in the fall.

Weaving mills that have steam up the year around and a lot of damp weather also experience the "sooty" bobbins. The black condition on the bobbins is caused by smoke.

If a mill will do the heavy firing around noon and midnight, this will eliminate the heavy smoke.

The humidity is heavier every morning and late in the evening; in fact, it is heavy until daylight.

After all windows are closed you have to have enough steam to heat the mill. People living in the neighborhood usually have more fires and consequently, more smoke late in the afternoon and at night.

Firing the boiler light all day would cause the smoke to be light and this would result in less soot on the bobbins.

CONTRIBUTOR No. 8027

(*Continued on page* 155)

YOUR CARDS · *Asset or Liability?*

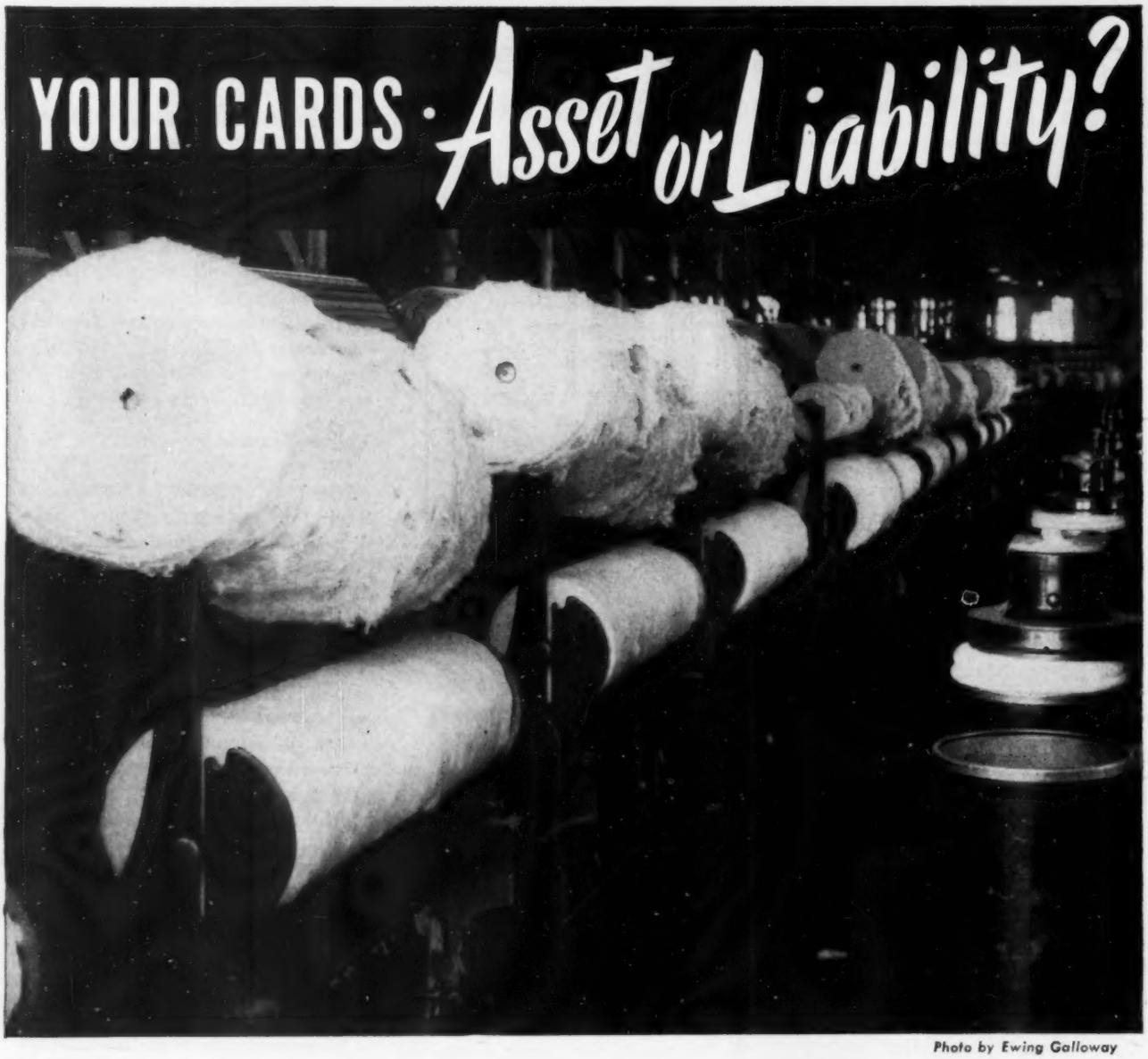

Photo by Ewing Galloway

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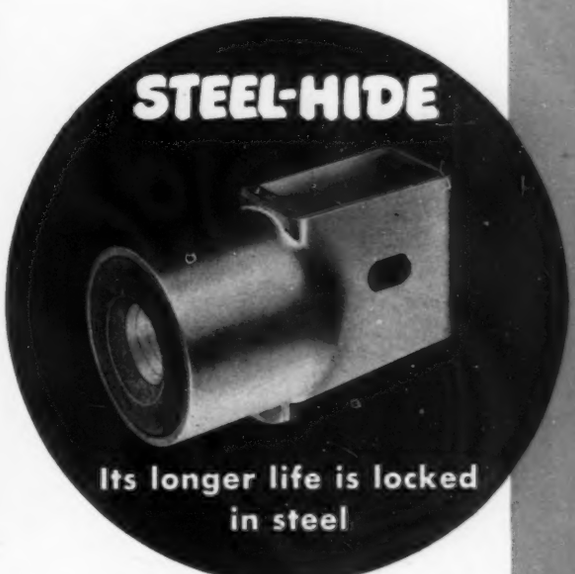

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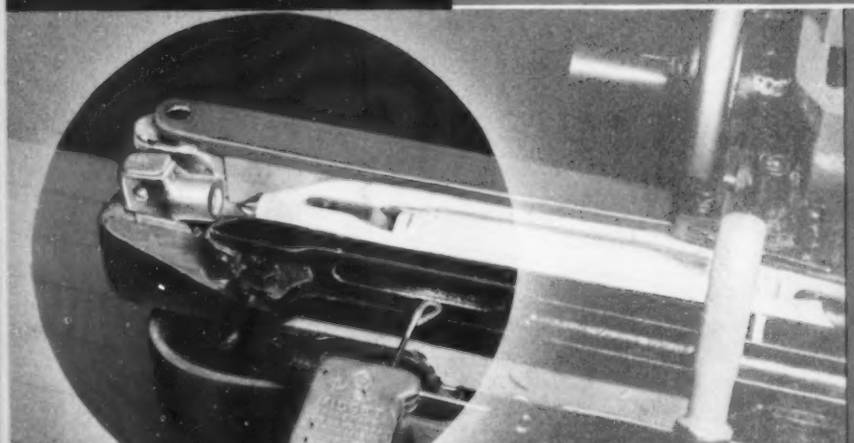
5. STEEL-HIDE stays in alignment on the stick . . . it won't work loose or twist on stick . . . won't rock . . . stays in place for life.

6. Steel-leather construction combines the strength of steel with the natural resiliency of laminated leather. Leather nose piece is bonded to the steel shell . . . hole is accurately shaped and positioned.

7. You get longer shuttle life. STEEL-HIDE dissipates heat more efficiently than other types of pickers . . . there's less danger of shuttle spur breaking loose.



STEEL-HIDE IS FULLY TESTED, both in the laboratory and in the field. Now in use on many looms with excellent results.

Textile laboratory testing of STEEL-HIDE loom picker.

Get Free Test Sample . . . Mail Reply Card Below

FIRST CLASS
PERMIT No. 54
(Sec. 510 P. L. & R.)
WORCESTER, MASS.

BUSINESS REPLY CARD
No Postage Stamp Necessary if Mailed in the United States

2c POSTAGE WILL BE PAID BY —

GRATON AND KNIGHT CO.
327 Franklin Street
Worcester 4, Massachusetts

LATEST ADDITION TO THE

GRATON AND KNIGHT

ORANGE LINE
LOOM LEATHERS

A complete line manufactured by the world's largest manufacturer of industrial leathers

EDITOR TEXTILE INDUSTRIES:

It is our experience that a clean plant will cause less soot to be on the bobbins than a dirty mill.

"Sooty" bobbins may be compared to conditions caused by a furnace where soot gathers on curtains, draperies, walls, ceilings, etc., in a home. The heat waves cause it to collect, and although steam radiators and oil furnaces produce less soot than coal furnaces, there is still an appreciable amount in the atmosphere.

However, an air conditioning system that washes the air will eliminate "sooty" bobbins. This is the only sure remedy that we know of at the present time.

CONTRIBUTOR No. 8028

Lumpy Yarn Presents Problem

Subject briefed: *Slubs or lumpy places are prevalent in yarn made from a blend of 80% dyed 15/16" Strict Low Middling cotton and 20% waste.* (CONTRIBUTOR No. 7950, *August* 1947.)

EDITOR TEXTILE INDUSTRIES:

Although CONTRIBUTOR No. 7950 does not give the machinery layout in his plant, it is my opinion that an improvement could be made by better blending of the waste with the good cotton.

By using 10% waste and 90% cotton, there would be a more even distribution of the second run material than is possible when using 20% in a mix.

This opinion on blending is based on experience that has been obtained in our plant which is making colored fabrics. In order to give a slight whitish tinge to a navy blue fabric, a mix of 7% white cotton and 93% of navy blue raw stock is fed into the blending feeders at the opening process, being further blended at the pickers.

CONTRIBUTOR No. 7951

Conveyor Belt Between Cloth Folders and Bale Press

EDITOR TEXTILE INDUSTRIES:

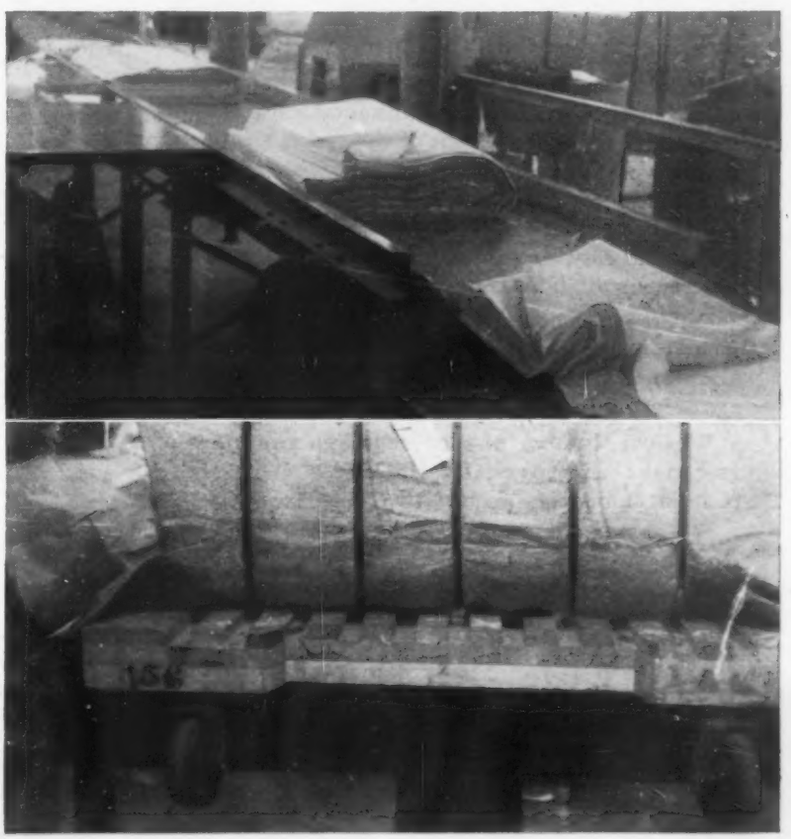
Your readers may be interested to know that we are now saving time by using a conveyor belt system between the folders and the bale press. This system is particularly applicable in the preparation of grey goods for shipment. The system allows a continuous flow of goods from one point to another, thereby eliminating the necessity of an operative wasting time hauling between the two points.

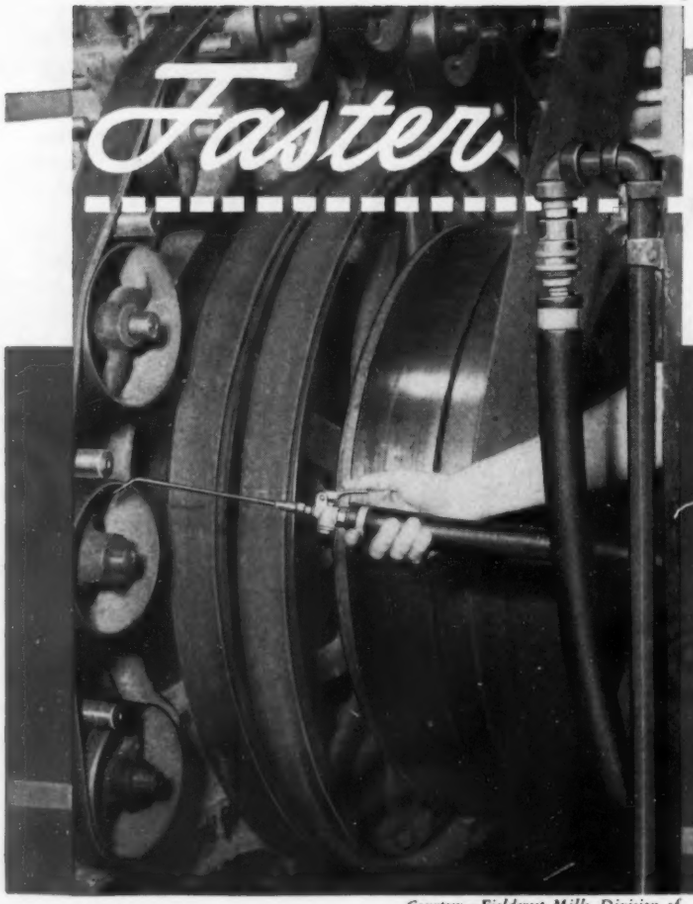
It was found best to have a belt that stops and starts automatically. A folded cut of cloth is removed from a folder and placed on the belt. The belt continues to run until the cloth reaches the receiving table at the opposite end, which is near the bale press.

We use a receiving table as the control station for the belt. As soon as a cut of cloth is deposited on the table by the momentum of the belt, the pressure on the top of this table throws a switch that stops the belt until this cut of cloth is removed by an operative, and is placed on a truck for the bale press. When the weight of cloth is removed from the surface of the receiving table, the switch is closed and the belt is in operation again. This automatic stopping and starting prevents piling of goods on the floor.

Material handling can be made more efficient by having a truck so constructed at the bottom that the recesses will correspond to those on the bale press. By rolling this truck loaded with folded cuts of cloth onto the bale press, it is possible to run bale ties through the bottom recesses on the truck and those on the press board of the bale press. The ties can then be secured around the bale of goods, and the truck can be rolled off for

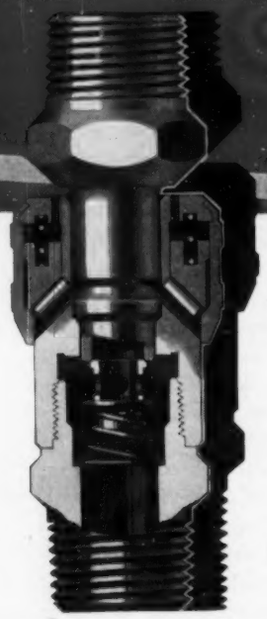
Conveyor belt shown at top. Lower photo shows truck on bale press.





Courtesy—Fieldcrest Mills, Division of Marshall Field & Co., Inc., Spray, N. C.

More Thorough ... Removal of LINT WITH HANSEN COUPLINGS AND BLOW GUNS



When it comes to "blowing off" lint, Hansen quick-connective couplings in your air line will save time, encourage frequent use, and do an efficient job.

Hansen Couplings have two outstanding features—quick-connect or disconnect—instantaneous, automatic shut-off. A slight movement of the socket sleeve either releases, or locks the plug securely with an air-tight seal. Release of the plug closes an automatic valve in the socket which holds the air pressure in the line. Quick and easy . . . no manual shut-off valves . . . no unscrewing of hose connections.

Different size hoses carrying different pieces of equipment can be plugged into the same series Hansen Coupling socket. Complete swivel action without leakage prevents twisting of the hose, giving longer hose life.

Whatever system of lint removal you now use, it can be improved by the addition of Hansen couplings and equipment.

Write for new industrial catalog No. 47 today.

HANSEN REPRESENTATIVES

New England States . . . . A. D. Geiger, Belmont, Massachusetts
Southern Ohio, W. Va., Ky.: Steinhagen Airline Products, Dayton, Ohio
Eastern, Southern States . . . . . B-R Engineering Co., Baltimore, Md.
Colorado, New Mexico, Utah, Wyoming: E. C. Wild Co., Denver, Colorado
Southwest Territory . . C. C. Brownfield, Dallas, Texas
Arizona, So. California . . . . . Burklyn Company, Los Angeles, California
Idaho, Oregon, Washington . . . Jack J. Kolberg, Seattle, Washington
Central Western States . . . John Henry Foster Company, St. Louis, Missouri, Minneapolis, Minnesota
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IN CANADA

Province of Ontario . . . . . John Best Associates, Toronto, Ontario
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QUICK CONNECTIVE FLUID LINE COUPLINGS . . .

THE HANSEN MANUFACTURING COMPANY

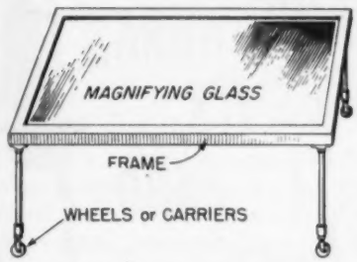
4031 WEST 150th STREET • CLEVELAND 11, OHIO

another load of goods. (See photo.)

Most cloth rooms have the bale press located from fifty to one hundred feet away from the folders. Savings in unnecessary steps and labor can be effected by use of the conveyor belt and improved truck bottom. This truck is strong enough to resist the pressure of the bale press.

CONTRIBUTOR No. 8003

Swatch Glass for Fabric Inspectors



This "kink" was an entry in a contest similar to one now in progress. For details, see announcement at the bottom of this page.

EDITOR TEXTILE INDUSTRIES:

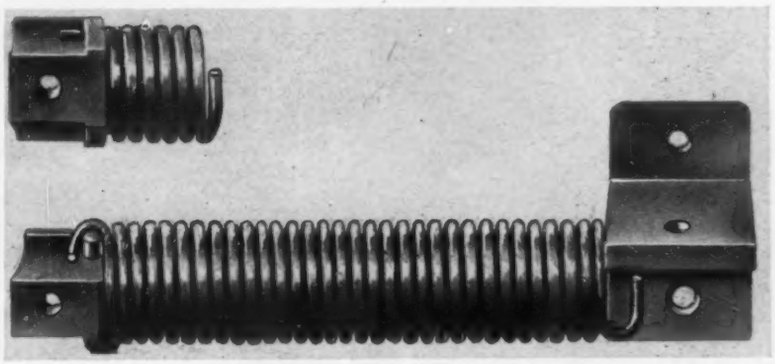
Designers and cloth inspectors have a difficult job checking swatches or samples of cloth with a 1" or ½" pick glass. If large amounts of cloth are to be checked for wrong draws, faulty design, or mispicks, a pick glass tires the eyes and reduces the person's checking efficiency. Using one eye where two eyes can be used is much more difficult and tiring.

A magnifying glass 8" x 12", of about 7 power, mounted on a frame with small wheels or carriers at the four corners, as shown in the accompanying illustration, is suggested. The glass could be moved across the cloth on the inspection table, and efficient mass inspection with the glass would permit the use of both eyes, thereby reducing eye-strain, and permitting faster inspection.

Pick glasses are essential for counting picks or picking out patterns, but they are inefficient when used to check full width swatches where there is a large turnover of patterns.

CONTRIBUTOR No. 8016

Stud on Protector Rod Collar Aids Efficient Loom Operation



This idea was submitted by a participant in a "kink" contest. Another contest is under way now. For rules, see announcement at bottom of this page.

EDITOR TEXTILE INDUSTRIES:

Many loom fixers who work on Draper Model E looms can save time and eliminate some headaches by making a simple change on the protector rod spring and collar.

The change can be easily made by placing a stud on protector rod collar (part No. LM-3024). The straight end of protector rod spring (part No. LM-1661) should be bent to form a "U." The "U" fits around the stud on the collar, thus eliminating the necessity for passing the straight end through the hole in the collar.

If this change is made, adjustments can be made without compressing the spring, the entire mechanism operates freely, and the right end does not bind tightly against the sword.

The accompanying illustration shows the spring and collar assembly. The standard arrangement for the spring and collar is shown in the upper part of the illustration. The assembly, with the change incorporated, is shown in the lower part of the illustration.

CONTRIBUTOR No. 8035

ATTENTION!!

$100 for Best Kink or Short-Cut

(Ends May 10, 1948)

ONE HUNDRED dollars will be awarded the contributor who furnishes the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea by May 10. The contest may be entered by any reader of this magazine, but the kink must not have been published elsewhere.

In sending in ideas, give complete description and where possible accompany description by sketch. Finished drawings are unnecessary. Participants are not restricted as to number of kinks submitted for consideration.

Only one award will be made, but non-winning contributions will be paid for at regular rates if used. Advise in original correspondence if participant's name may be used, or if contributor number is preferred.

All entries must be postmarked not later than midnight of May 10, 1948. Address: Editor "Textile Industries," Grant Building, Atlanta, Georgia.

For example of a kink, see item Pinning Loose Shuttle Spurs, appearing on page 147, this issue.

A recent installation of Model "L" Cards at Alma Mills, Gaffney, S. C.

WHITIN MACHINE WORKS ANNOUNCES ITS NEW MODEL "L" CARD

WHITINSVILLE Jan. 1947 (WMW) Whitin Machine Works today announced the new Model "L" Card. The development and building of this machine is said by officials of the company to represent an important step forward in cotton carding. The card has been thoroughly tested under mill operating conditions with entirely satisfactory results.

UP-TO-DATE *Report* ...on an up-to-date CARD!

Our new Model "L" Card was first announced to the industry a year ago through the textile trade journals. Since then the wide spread acceptance of, and demand for this model has proved its exceptional merit.

Literally hundreds and hundreds of these cards have been built and installed. Reports from mill after mill are always the same . . . favorable reports of better production, greater efficiency, increased cleanliness and quieter operation.

Numbered among the many new and beneficial features of the Model "L" Card are:

- Card frame, cylinder bearing pedestals, and arches have been strengthened to provide greater rigidity which is especially beneficial in maintaining card settings.
- Improved Top Flat Drive, Spiral Brush Drive, Coiler and Calender Drives are provided.
- Feed Roll weighting has been simplified, and the Feed Plate has been strengthened to resist pressure deflection.
- Oilite bearings have been provided in many locations to insure better lubrication.
- All gears have cut teeth for quieter operation.
- Surfaces and Contours have been restyled to facilitate cleaning.
- Adjustments can be made with greater ease and convenience.

These and many other features combine to make this model an up-to-date, smoothly operating, highly efficient card. Write today for our illustrated folder giving complete details and technical data.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA.

Research on Palmetto Fiber for Textile Uses

Approximately three and one-half million acres of Florida land is covered with the parasitic scrub growth palmetto. During the last war navy gun wads were made from this source and Florida manufacturers produce whiskbroom from it. In view of the tremendous supply of palmetto, greater economic possibilities for it seem feasible.

The United States Testing Company, Inc., was recently called upon to conduct research to determine the practicability of removing and making use of fiber from the scrub palmetto. U. S. Testing engineers set up a "preliminary investigation of usefulness" program which is described here.

In this investigation the common hand methods of freeing the fiber from the bark and pulp were used. A weighed palmetto log was freed of the bark to yield the pulpy center containing the fiber. A length of the pulpy center was then sectioned into slivers which were broken down with a wooden mallet.

Most of the pulp was separated from the fiber in this operation. To further the cleaning action, the fiber and clinging pulp were run in a small paper pulp beater for five minutes. The clinging fiber was then weighed after drying to obtain a percentage yield.

The strength of the fiber in its natural state, both wet and dry, was obtained on a Scott inclined plane tester of 0-5 pound capacity using the flat grip type of jaw. Fiber diameter was measured using 40 fibers selected at random from the lot.

Results of the investigation were as follows:

Clean dry fiber extracted from two-inch length of log	25 grams
Average dry fiber strength	3.8 lbs.
Average wet fiber strength	3.04 lbs.
Per cent loss when wet	4.42%
Average fiber diameter	0.0168 in.
Fiber strength (lbs. per sq. in.)	15,781 lbs.

It was concluded that the palmetto fiber does not appear to be readily affected by moisture, so that the wet strength is quite comparable to the dry strength. Also there is considerable yield of pulp on cleaning the fiber so further investigations into the use of the pulpy product will be made.

Basically, this preliminary investigation was made to observe the nature of the fiber for textile uses. Further investigations will encompass not only textile uses in altered conditions of the fiber, but fiber uses outside of the textile field such as mattress and upholstery stuffing, insulation, tufted rugs, plastic laminates and webbings.

British Woolen Export Targets

Export targets for Britain's woolen industry aim at the eventual export of about half the industry's total production, according to a recent announcement by British Information Services, an agency of the British government.

The target to be reached by mid-1948 is an export volume of 146% of the 1938 level. By the end of the year it must be raised to 182%, or close to twice that of prewar.

Piece goods bear the main weight of the intensified program. An annual export rate of 100,000,000 linear yards has been set for the first stage (compared with a rate of 51,000,000 in the first seven months of 1947); and 130,000,000 linear yards per year as soon as possible afterwards.

Only a slight increase in yarn exports has been stipulated. The target for tops has been set at nearly 60,000,000 pounds annually, compared with a rate of 34,000,000 pounds reached in the first seven months of 1947.

At the same time it was announced that the Harris Tweed Association is planning to increase its output by a million yards in 1948. Most of it now goes for export, the main markets being U. S. A., Canada, South America, Sweden and Switzerland.

The Association's overseas advertising will stress the importance of the trademark which protects both customers and the industry from attempts to sell imitation Harris tweed. People will be shown how to identify the genuine article, the announcement said.

Courtesy, Old Dominion Box Co.

Textile manufacturers are recognizing the importance of packaging ingenuity as an aid in increasing sales of their products. Shown here are three outstanding packages developed by well-known textile mills. In the upper photo is a box used by Martex for packaging dish towels, dish mops, pot holders, etc. Center photo shows a gift box designed for packaging bath sets. In the lower photo is a box used by Cannon for towel sets.

"Wool in the United States"

This is the title of an excellently prepared educational booklet recently issued by the National Association of Wool Manufacturers, 386 Fourth Ave., New York 16, N. Y.

Included in the publication is information on the world wool supply, description of processes used in the manufacture of woolen and worsted fabrics, principal uses of wool cloth, channels of distribution, location and size of the wool industry in the United States, the national importance of the wool textile industry, etc.

The booklet is available to students and other lay persons interested in the wool textile industry, without charge upon written request to the National Association of Wool Manufacturers.

PRODUCE QUALITY YARN

Armstrong's Cork Cots draft uniformly

You get better running work when you install Armstrong's Cork Cots because their seamless surface grips the yarn evenly. Cork, with its many six-sided cells, gives these cots high frictional properties. Cork also won't slick. That's why these cots draft uniformly, produce top-quality yarn consistently.

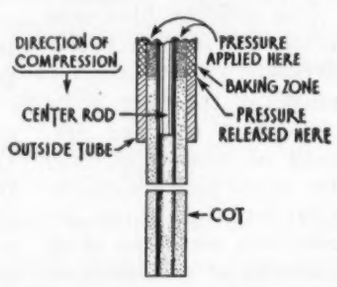
The high coefficient of friction eliminates eyebrowing, too. Armstrong's Cork Cots reduce clearer waste as much as 50%—and place it back on the clearer boards where it belongs. This means cleaner work and less clearer picking.

Armstrong's Cork Cots are also exceptionally resilient. They recover quickly from most laps or hard ends. They give you fewer ends down per thousand spindle hours, so your operators do less piecing up. They won't flow under roll weighting.

Low in first cost, Armstrong's Cork Cots have a long initial service life. When they do show wear, they can be rebuffed for 3 or 4 extra service lives.

Ask your Armstrong representative for samples, prices, and complete information. Or write today to Armstrong Cork Company, Textile Products Dept., 3602 Arch St., Lancaster, Pa.

EXTRUSION PROCESS PRODUCES SEAMLESS CORK COTS



Armstrong's Cork Cots have no structural weakness to cause premature breakdown. Each cot is uniform in density from inside to outside, from end to end. Each compresses evenly, spins stronger yarn, lasts longer.

Better running work . . . more poundage

ARMSTRONG'S CORK COTS

ACCOTEX COTS • ACCOTEX APRONS

WHAT THE TEXTILE MILLS ARE DOING

Diamond Textile Co., Inc., is a new concern at Paterson, N. J., now manufacturing fabrics from synthetics with 40 Draper looms. Harold Diamond is president; Murray Ornstein, vice-president; and Irving Rakow, secretary and treasurer.

Hudson Worsted Co., Hudson, Mass., has almost finished a four-story, $600,000 carding and combing building. Machinery will be installed early in 1948.

Riegel Textile Corp., Ware Shoals, S. C., sheetings, drills, flannels, etc., has acquired the mill and property of Virginia Mfg. Co., Fork Shoals, S. C., cotton yarns, and will continue operations as a branch mill in the future.

Riegel Development Laboratories, Inc., Ware Shoals, S. C., has completed its pilot plant and will carry on studies of a variety of aspects of textile chemistry and production with modern laboratory facilities.

Berkshire Fine Spinning Associates, Inc., Providence, R. I., is projecting plans for a large expansion and improvement program at the mills to be carried out over a period of several years. The gross investment is reported to be $8,000,000. Work will include new mill units and installation of the latest type machinery.

Carter Finishing Co. has been chartered with a capital of $250,000, to operate a bleach, dye and finishing mill at Gastonia, N. C. A. D. Carter is principal incorporator.

Engraving facilities of the Arnold Print Works, Adams, Mass., affiliate of Aspinook Corporation, have been increased by 50 per cent.

A new knitting and weaving industry has been established by Antony Kozik, weaver, at The Pas, Manitoba, Canada. Mr. Kozik has purchased two machines and plans to card, spin and weave woolen garments.

Palestine Rayon Corporation, New York, has plans proposed for a rayon plant in Palestine.

The corporate name of The D. E. Converse Company has been changed to Glendale Mills, Inc., located in Glendale, S. C. All contracts and commitments will be continued under the new name.

Construction of a two-story modern addition to Calhoun Mills, Calhoun Falls, S. C., has been started, and will provide more space for carding and spinning operations. The project also includes 25 new homes for employees.

Merger of the Uxbridge Worsted Co., Inc., woolen and worsted manufacturers operating mills in Massachusetts, Rhode Island, Connecticut and Georgia, and L. Bachmann & Co., Inc., selling agent and factor in New York for Uxbridge and other mills, has been announced.

Henry R. Lee (left), assistant to the president of Stonecutter Mills, Spindale, N. C., and Frank C. Williams, president and treasurer of Paterson Mills Co. and Roanoke Mills Co., Roanoke, N. C., are shown here receiving the awards of honor presented to their mills for low accident records.

The installation of lace weaving machines of English manufacture is under way in the addition to the plant of Columbia Mills, Inc., Wilkes-Barre, Pa. Other winding and processing machinery will be furnished by American manufacturers.

It has been announced that Richard Borden Mills Corp., Fall River, Mass., has purchased the former Verney-Shawmut Mill, also of that city, and will operate the plant as a unit of its present facilities. The property was formerly owned by Crescent Corporation.

Lola Mills, Inc., of Stanley, N. C., has been acquired by the Carter Fabrics Corp., a subsidiary of J. P. Stevens Co. The present operating personnel will be retained.

Top officials of Textron Incorporated and Puerto Rico Industrial Development Company have contracted for the establishment of a new 25,000-spindle print cloth mill in Ponce, Puerto Rico. The estimated cost, including land, building and equipment, is approximately $3,500,000.

The School of Textiles at North Carolina State College, Raleigh, N. C., has received a donation of $10,000 from B. B. Gossett of Charlotte, a retired textile manufacturer. The money will be used for the establishment of the "B. B. Gossett Textile Lecture Series."

Joseph Bancroft & Sons Co., Rockford, Wilmington, Del., bleaching, dyeing and finishing, is in the process of arranging an expansion and improvement program for a large increased capacity. The work will include new buildings and the installation of equipment. Cost is reported to be approximately $1,000,000.

Moultrie Cotton Mills, Inc., has asked bids on general erection contract for a one-story addition to be equipped as a weave shed, with part of the structure designed for distribution service.

The recently organized Fullerton Cotton Mills, Newnan, Ga., have work in progress on the installation of equipment, comprising 10,752 spindles and 35 cards. The company will specialize in cotton yarns.

Thomaston (Ga.) Mills, sheetings, have asked for bids on a general erection contract for a one-story addition to be used as a grey goods warehouse for the bleachery division. The cost is reported to be over $80,000, with equipment.

Townsend Cotton Mills, Inc., has been chartered to take over H. C. Townsend Cotton Mill, Anderson, S. C., recently acquired by Harry L. Dawes, Greenville, S. C., and associates. Operations will be continued for the production of yarns and twine. Mr. Dawes is president and treasurer of the new company.

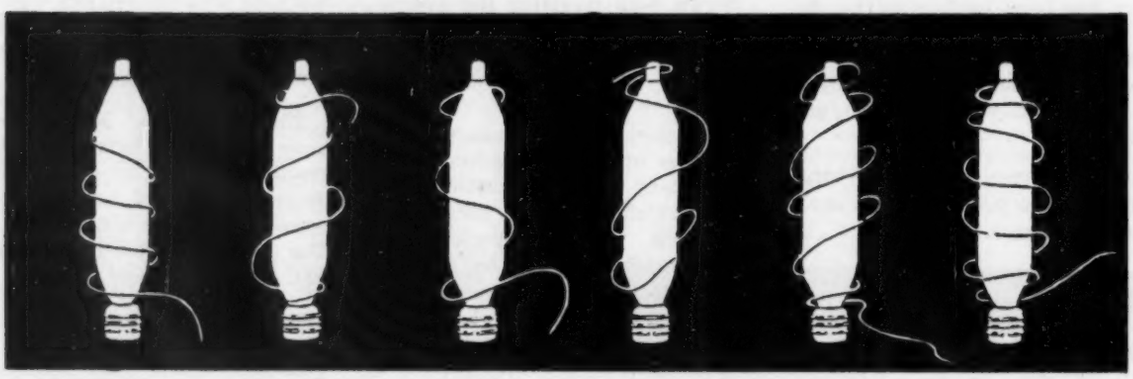
DESIGNED FOR ONE PURPOSE . . .

TO ELIMINATE UNEVEN PACKAGES AND TAILS

The economy and efficiency of Numo Automatic Spinning Controls have been proved in America's largest textile mills. It offers these major advantages!

- Eliminates the necessity of doffers bearing rail down manually . . . makes doffing easier.
- Eliminates uneven packages from doff to doff
- Eliminates uneven tails left at butt of bobbins.
- Increases production by saving time at each doff.
- Reduces number of ends down on doff . . . Effects many other direct savings.
- Uniform packages and tails eliminate the necessity of unraveling long tails and "hunting" for ends. This means less bobbin transfer or break-out, as well as reduction in waste yarn. Once set for desired bobbin size and tail, there will automatically be a duplication on all succeeding doffs.

Write today for illustrated literature showing why more and more mills are turning to NUMO for increased production and lower cost.



NUMO MACHINE & ENGINEERING CO., INC.

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Floyd Isom
Station C, Box 164
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The Rudel Mchry. Co., Ltd.
614 St. James St., West
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Barnhardt Bros. Export Corp.
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Designed Especially For You-

Handy
Compact
Easy to Read

Ciba's NEW DYERS' Slyd-Rul

(Made of plastic)

DYESTUFFS • CHEMICALS • INTERMEDIATES

CIBA COMPANY, INC.

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BOSTON · CHICAGO · MONTREAL · CHARLOTTE
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VAT DYES OF THE DOW CHEMICAL COMPANY

Another example of Ciba's technical service to make your job easier.

Straight Side – Top Drive –

WARP SPINNING BOBBIN

for Easier Doffing

The spindle fits the "cushion grip" with a gentle squeeze to force top-drive contact which breaks sharp and easy, without drag or pull in doffing.

This one feature alone—easier doffing—effects savings sufficient to warrant the change-over . . . SONOCO Warp Spinning Bobbins are made in four standard lengths and outside diameters to meet various traverse lengths, ring diameters and angles of yarn pull.

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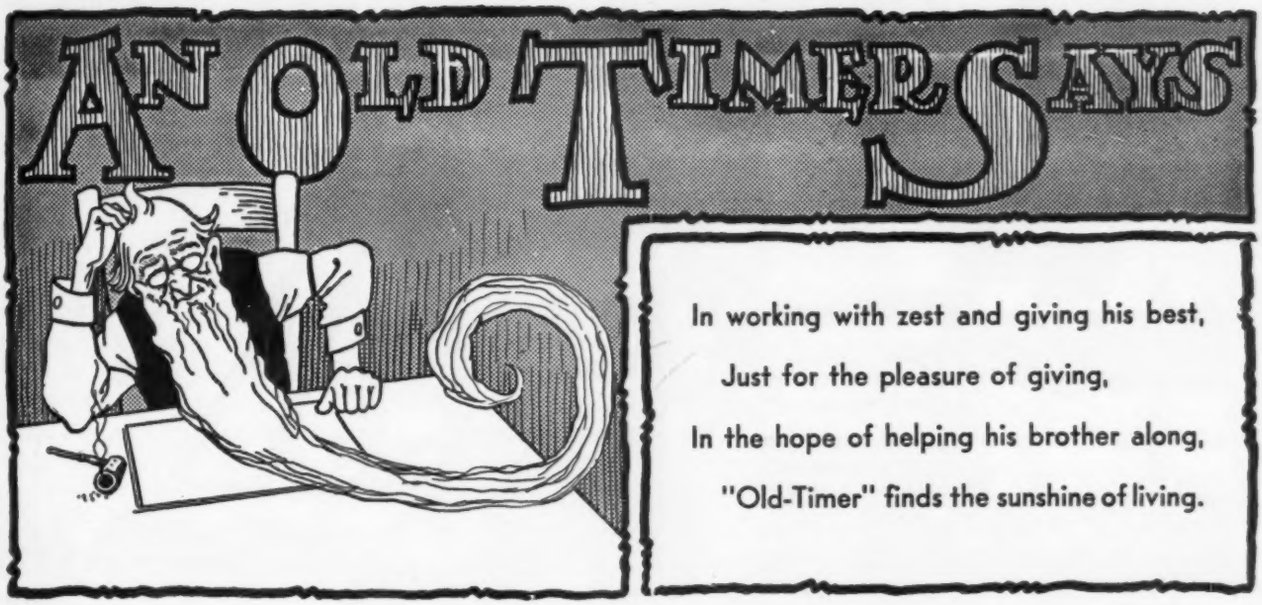
SONOCO PRODUCTS COMPANY

BRANTFORD ONT. · HARTSVILLE S. C. · MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Introverts and Extroverts

INTROVERTS and extroverts. Now what in heck is that? OLD-TIMER sees considerable use of these two words in print, newspapers, magazines, and books. Therefore it may be of some information to our readers if we try to explain in plain United States language what kind of a guy an overseer, superintendent, or manager is who may be classed as an introvert and one who may be classed as an extrovert.

Aside from technical definitions, which we frankly admit we are not familiar with, but only as we understand it, the introvert is the man who is rather backward in his relations with people. He is not a very good conversationalist. He often waits to be asked for his opinion before he expresses himself. He would not make a very good salesman, certainly not the door-to-door type.

His hobbies are usually of the type which do not require his association with others. For example, a young lawyer who had a few acres just out of town spent all his spare time out there tinkering with his tools, looking after his chickens, etc., while he should have been spending his spare time with things which would have caused him to meet more people, make more friends—prospective friends who some day would need the services of a lawyer.

What is your first thought when a secondhand or overseer or superintendent quits you for another job? Naturally you think over the assistant overseers or superintendents you know. Some fellow you have met at a textile meeting or some other way. Someone you know.

Now the extrovert is almost the opposite to the introvert in most ways. He takes part in everything. He takes advantage of the opportunity to meet people. He helps out in civic work, he helps with the drives for this and that, the Boy Scouts, the baseball team, and the church. Young man, if you expect to go places in the textile industry, learn to be an extrovert, and you older overseers, superintendents, and managers, if you are an introvert, you had better start changing your ways or make larger payments on that farm, for you will soon be farming.

RANDOM THOUGHTS: Up and Down Together

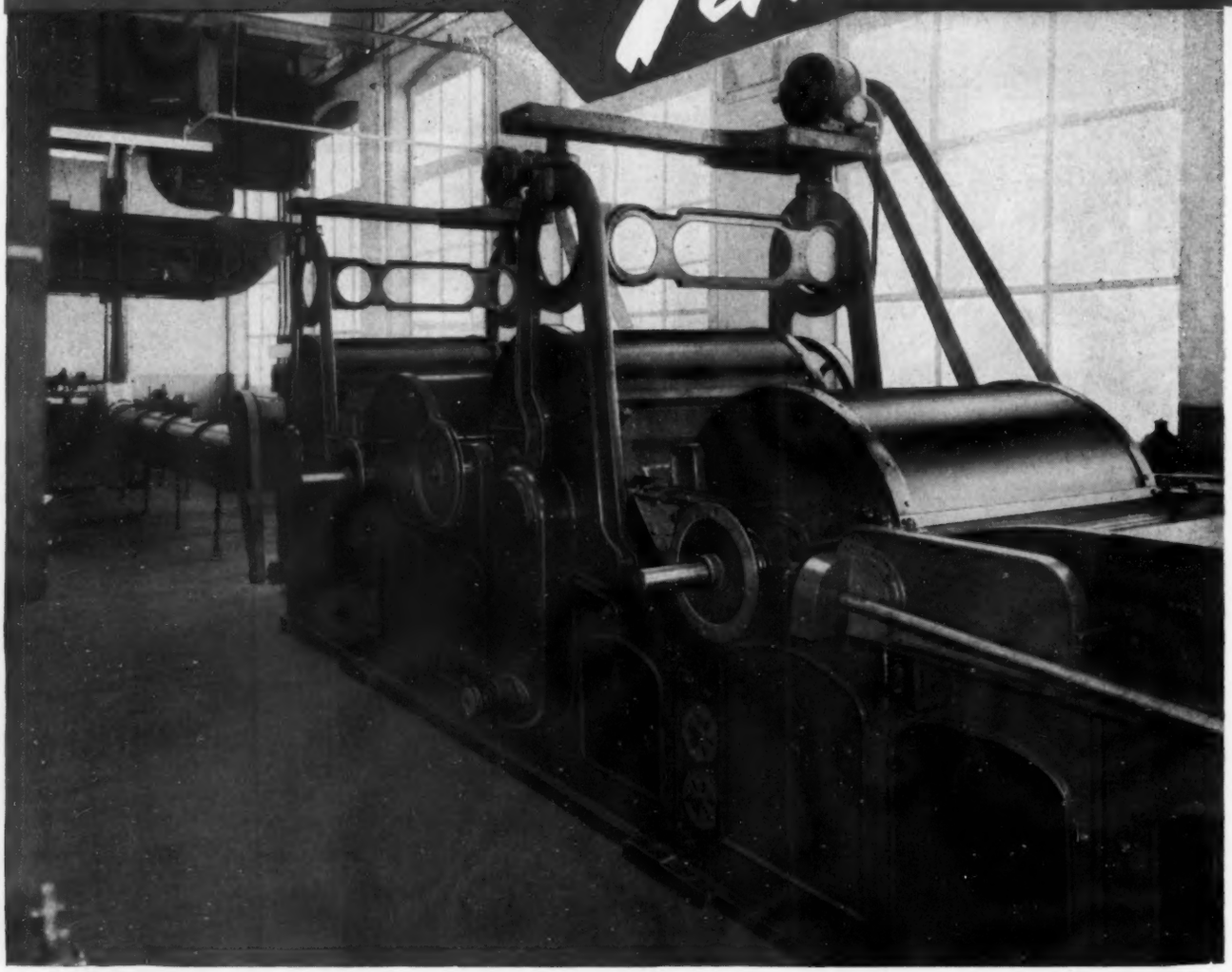
REMEMBER that old slogan OLD-TIMER has used for years and years on this page? Yes, he used it in all his labor relations, too.

—"We All Go Up and Down Together."—

One interpretation of that slogan could be worded this way: The object of a textile plant is to manufacture goods at the maximum production so those goods may be sold to the consumer at the lowest possible cost, with opportunity for constantly higher wages to the worker, as living conditions demand, and with a reasonable return to the man who has his dollars invested in the plant and machinery.

Gentlemen, it is up to you to convince your operatives that "We All Go Up and Down Together."

H & B Tandem



● The H & B Tandem Opening and Cleaning Unit is an important factor in the quality performance of H & B opening room machinery. Furnished in single, double or triple units (and tandem operation is recommended by our engineers for greater efficiency), this machine is designed to keep a flow of effectively opened and cleaned raw stock moving to the pickers.

• • •

H & B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

OPENING AND CLEANING UNIT

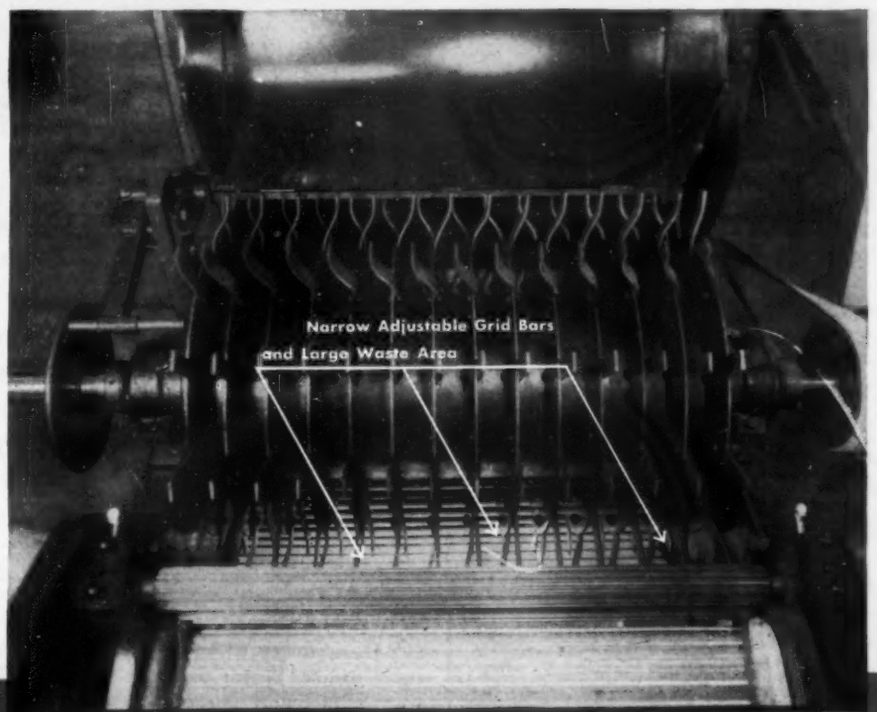
Tandem Operation Recommended

● The beater sections are equipped with 30" diameter Buckley beaters mounted on anti-friction ball bearings. These smooth running beaters thoroughly open and clean the cotton. Dirt and leaf are collected in the large waste area under the beaters and the narrow grid bars are adjustable, according to the type cotton being processed. Beater covers and guards are locked while machine is running, for protection of operators.

The cage sections are the lattice delivery type with adjustable air vents for control of cotton on the cages. Steel bladed fans are mounted, like the beaters, on heavy ball bearings for smooth operation.

The correct flow of opened and cleaned cotton to the pickers is maintained by modern feed controls, actuated by the mercury switch on the picker. These controls stop the delivery aprons and feed rolls but allow the beaters to keep rotating. The operation of this clutch type control prevents ineffective beating due to the frequent stopping of the beaters and the consequent lag in gaining full speed again.

Because it does such an effective job of opening and cleaning, the Tandem Opening and Cleaning Unit is truly representative of the achievement of quality at H & B.



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Textile Machinery

DIVISION PAWTUCKET, RHODE ISLAND, U. S. A.

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Others have, and it hasn't cost a cent . . . Paid for itself remarkably soon.

•

Parks-Cramer Company

Fitchburg, Mass. Charlotte, N. C.

You get a SURE FIT

That Kentex Aprons actually do *fit better* is borne out by their steadily increasing sales over the past nine years, and unsolicited praise from spinning room overseers.

But far stronger than this is the proof you will see for yourself, on your own frames, that KENTEX is the apron you can't afford to pass by for greater yarn uniformity and increased yarn production. Send us your size. We'll send you some free test KENTEX APRONS promptly.

Kentex Aprons made to any specifications, on short notice. Write for free samples and prices.

TEXTILE APRON COMPANY

EAST POINT, GEORGIA

J. B. KENNINGTON, OWNER

NEW EQUIPMENT
AND MATERIALS

Schiefer Abrasion Tester

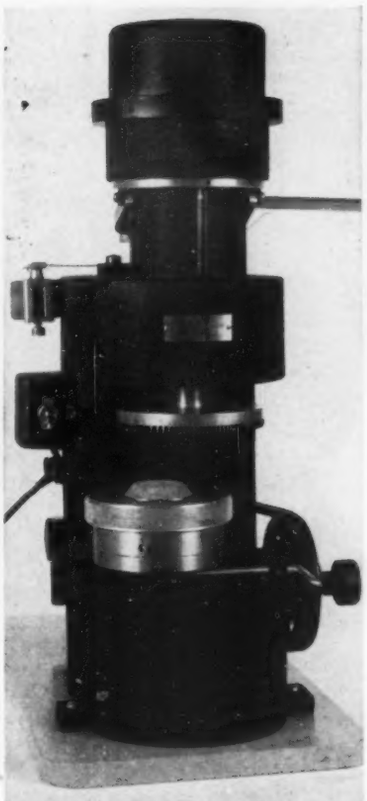
On page 125 of the May 1947 issue of TEXTILE INDUSTRIES a description of the Schiefer abrasion testing machine as developed at the National Bureau of Standards, was presented. This particular machine was of horizontal design. Later, it was decided to redesign the machine before placing it on the market for use by industry. This has now been accomplished. The accompanying photo shows the new machine which is now being manufactured by Sherman W. Frazier, 953 Fifteenth St., S. E., Washington 3, D. C.

This machine is said to produce uniform abrasion over a plane area of a specimen from every azimuthal direction. It is based upon the mathematical solution recently worked out by Dr. Herbert F. Schiefer, physicist at the National Bureau of Standards, to obtain uniformity of wear, excluding any preferential direction. It is reported that the advantages and applications of this machine to research and testing are many, for the machine realizes perfectly determined constant conditions and will therefore lead to comparable results .

The machine offers a new approach for measuring the resistance of abrasion of many organic and inorganic products, such as textiles, plastics, leather, lineoleum, ceramics, wood, etc. The effects of chemical and mechanical treatments on the resistance to abrasion of these materials can likewise be determined.

Fabric series can be tested to obtain optimum resistance to abrasions, it is said. Similarly, the effects of different laundering methods and detergents on the resistance to wear of fabrics can be evaluated.

For maximum utility the new machine can be provided with interchangeable parts. Different abradants can be used and specimens of different products can be held for the test. The specimen and specimen holder are readily removable and replaceable to permit quantitative measurements of the amount of abrasion at stated intervals during the test. The rate of abrasion from beginning to termination of a test and a numerical abrasive resistance index can be obtained from these measurements.



Schiefer abrasion tester.

The size of the specimen to be tested, the tension on the specimen, and the pressure between the specimen and the abradant can be varied as specified.

Color Microscopy Process Speeds Identification of Materials

Development of a new microscopy technique, termed "disperson staining," which provides a speedy and accurate identification of a wide range of colorless, transparent substances, has been announced by Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y.

It is understood that only standard microscope equipment is required to turn transparent, colorless objects to bright colors. By choice of the correct immersion liquid which is placed over the sample, each different material appears a different color.

The method by which white light on a colorless object produces color, has a sound scientific explanation, according to the manufacturer. The light from the microscope lamp is passed through a darkfield substage lens to strike the sample at a high angle. The sample is covered with a high dispersion liquid that matches the light-bending ability of different materials in the sample at different portions of the color spectrum.

Each material then scatters some of the colors present in the white light into the microscope where they are seen by the observer while other colors pass directly through the sample at such a high angle that they do not enter the microscope.

The new method is expected to increase use of the microscope in testing textiles for fiber identification, as well as other fields.

PMA Size for Nylon Warps

The Du Pont Company has announced that polymethacrylic acid (PMA) textile size is now available. It is reported to be particularly suited for slasher sizing raw nylon continuous filament warps.

Promising results were achieved using PMA for slasher sizing and weaving in tests made in several mills and at the Newport, Del., weaving laboratory of Du Pont's Nylon Division, during recent months, the announcement indicated.

The experimental and commercial trials have proven successful in slashing warps of many constructions and weaves, according to the service bulletin on PMA textile size recently issued by Du Pont. Excellent results were obtained in satins, twills and lenos, and marked improvements were noted on taffetas, it is understood.

PMA is readily water soluble, easy to apply and is easily removed in scouring, the bulletin states. Its performance has been the most satisfactory of the many candidate sizes evaluated by Nylon Technical Service, the company said.

Since PMA has excellent adhesion to raw nylon, loom shedding, the flaking or powdering of the size, is practically eliminated when PMA is applied to the warp uniformly and in proper amounts. PMA sized warps generally exhibit a satisfactory break at the split rods. With normal pick-up of size and proper drying on the cans, the split should occur well before the warp reaches the first bar.

For scouring, conventional hot water, soap, and alkaline scours have

Many cotton mills have found it profitable to consult Corn Products textile laboratory at Greenville, South Carolina.

The services of our technicians are offered textile manufacturers without obligation.

CORN PRODUCTS SALES COMPANY

Greenville, S. C. • Greensboro, N. C. • Atlanta, Ga.

been found satisfactory in removing PMA from woven fabrics. Yarn which has been tinted may require special scouring procedure.

Packaged as a dry powder, PMA size is available in 50 and 100 pound, net, containers.

New Electric Motor

A line of improved totally-enclosed, fan-cooled, wound-rotor motors has been announced by the Allis-Chalmers Mfg. Co., Milwaukee, Wis. The motors are built with an improved tube-type air-to-air heat exchanger. Because of its simple design, cleaning is seldom.

The improved motors are said to be suitable for all fields of industry, since they can be readily adapted to suit the requirements of any special industry.

The motors can be built with stainless steel ventilating tubes, fans, and end plates and cast iron terminal boxes and collector ring enclosures.

Adjustable-Blade Fans

The Joy Manufacturing Company, Oliver Building, Pittsburgh, 22, Pennsylvania, has announced a new line of "Axivane" adjustable-blade fans, Series 1000, for heating, ventilating, and air conditioning requirements in the industrial and commercial markets.

The series consists of axial-flow fans of the vaneaxial type designed for a range of pressures up to 9.60 water gauge and volumes up to 100,000 c.f.m. The fans are available in 124 different models—from various combinations of 15 different housing diameters (18" to 60"), 4 hub sizes, 16 motor-frame sizes, and 4 different speeds.

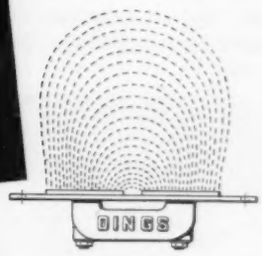
The adjustable-blades insure great flexibility in performance, it is claimed. A simple, compact design with direct, in-line drive is said to lower installation costs, minimize space requirements and develop maximum volume and pressure per pound of fan-and-motor.

Pin-type Flexible Coupling

A new pin-type flexible coupling incorporating the "Taper-Lock" bushing used successfully with V-belt sheaves has been announced by the Dodge Manufacturing Corporation of Mishawaka, Indiana.

The use of this bushing not only insures fastening to shaft with firmness of a shrunk-on fit but also makes

Permanent MAGNETIC POWER TO STOP TRAMP IRON



New—DINGS ALNICO PERMA·PLATE MAGNET

Here's the low cost, positive, modern way to stop tramp iron, protect machinery, eliminate fires from iron sparks. Highest grade Alnico . . . advanced design . . . lightweight . . . easy to install . . . no operating cost . . . no maintenance . . . magnetic permanence guaranteed for life of installation! Standard or special models to fit into any system in any mill. Let Dings Engineers plan your installation. WRITE FOR BULLETIN. Dings Magnetic Separator Co., 4726 W. McGeogh Ave., Milwaukee 14, Wis. Permanent and Electromagnets for every purpose.

Dings "HIGH INTENSITY" Since 1899

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USED THROUGHOUT THE TEXTILE INDUSTRY FOR:

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FORECAST

Today . . . tomorrow . . . always

IDEAL PROCESSING WEATHER

AMCO EVAPORATIVE COOLING AT PONEMAH IMPROVES YARN STRENGTH — AIDS SPINNING

Part and parcel of Ponemah's reputation for fine count cottons and rayons are the continuous efforts made to assure fabric superiority. An important recent step was the introduction of AMCO Evaporative Cooling.

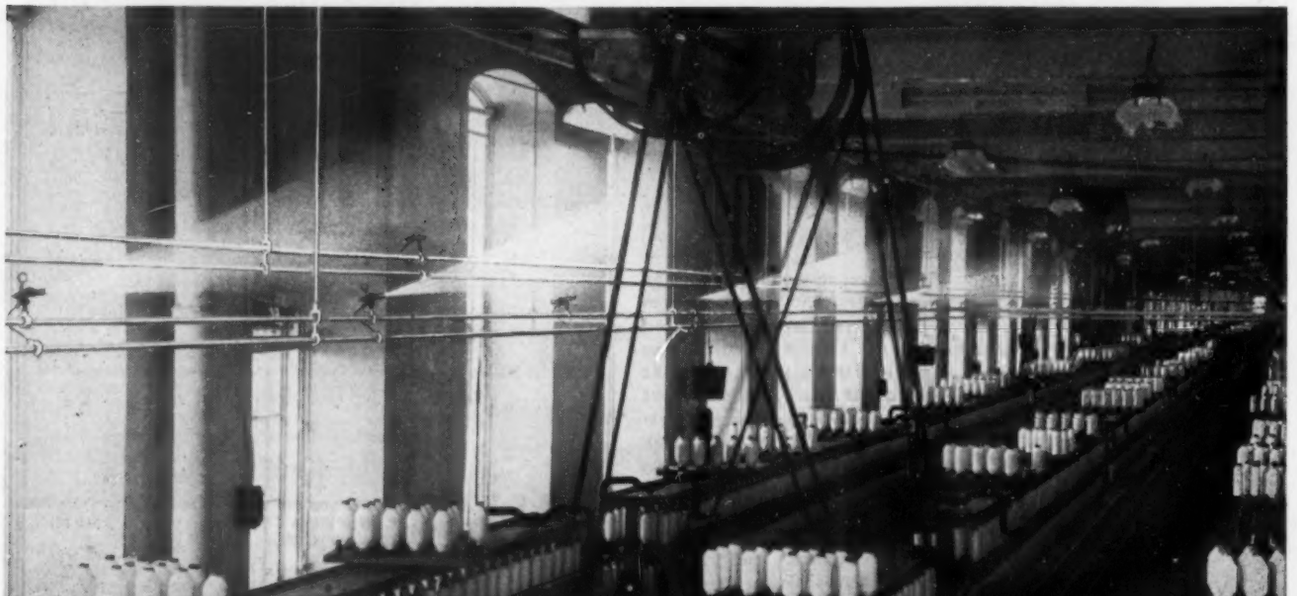
Ponemah already had humidification. The addition of AMCO Evaporative Cooling has proved a low-cost, practical way of meeting the excessive heat burden imposed by the spinning process. The results have been greater yarn strength, more efficient spinning, improved worker comfort.

AMCO Evaporative Cooling utilizes the humidification system to absorb the frictional heat of high speed machines in conjunction with carefully controlled airflow. No ducts or expensive alterations are needed. Installation can normally be made without serious interference with production.

Right now — see for yourself how quickly this system pays for itself with greater production, lower costs. An AMCO engineer will be glad to make a survey and submit recommendations for the exact system to meet the particular conditions and needs of your mill.

FEATURES OF AMCO HUMIDIFICATION AND COOLING

- ★ Reduces excessive temperature and holds relative humidity at point best suited to fibre and process.
- ★ Speeds production in high friction (heat) areas.
- ★ Assures evener yarn counts and increases breaking strength.
- ★ Gradually increases regain for good roving and consequent better spinning.
- ★ Drafting of fibres smoother and more compact.
- ★ Waste and fly greatly reduced.
- ★ No cumbersome ducts to require cleaning and obstruct light.
- ★ Easier to install — minimum disruption.
- ★ High flexibility to meet changing room conditions.
- ★ Minimum maintenance.
- ★ Amco Evaporative Cooling utilizes your present humidification system.
- ★ Increases worker comfort.



AMCO HUMIDIFICATION and COOLING

AMERICAN MOISTENING CO. AFFILIATED WITH GRINNELL COMPANY, INC. PROVIDENCE, R. I. · BOSTON · ATLANTA · CHARLOTTE

reboring unnecessary, according to the manufacturer. The center disc is of oak tanned sole leather providing flexibility, resiliency and strength.

Compactly designed, the unit occupies minimum space on shaft and there are no projecting parts. Center disc can be easily removed by loosening coupling flanges and sliding them apart on shafts.

Large diameter centerless ground pins which are pressed into the flanges can be easily renewed. Coupling is machined all over to insure balance and true running. It is easy to install and remove and can be disconnected without moving coupled machines. It will be available from distributors' stocks.

New Formula Reduces Bleaching Time

A 50% reduction in the time required to bleach knit goods in the Butterworth continuous bleaching system has been announced by H. W. Butterworth & Sons Co., Philadelphia, Pa.

The saving is achieved by using a peroxide-silicate-caustic formula recently developed in the DuPont laboratories, the announcement said. Instead of treating goods with caustic and later with peroxide, the two stages are combined in a single run.

The equipment for the Butterworth bleaching range for knit goods requires only 44 feet in the bleach house. It includes an impregnating machine, steaming tube, "J"-box, slack washer and squeezer.

A.S.T.M. Standards on Soaps and Other Detergents

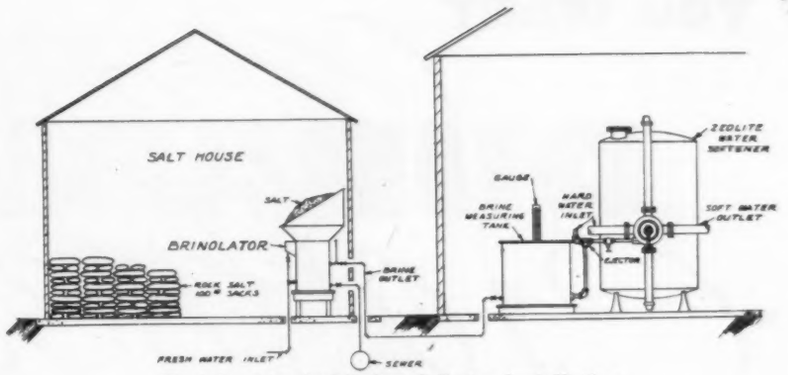
In addition to the 24 specifications and 7 test methods covering numerous soaps and detergents, this compilation, sponsored by the American Society for Testing Materials through its Committee D-12, includes an extensive bibliography of metal cleaning which has 375 references, many of them with annotated abstracts.

The specifications in this November 1947 publication cover the following: bar soap; various kinds of chip soap; powder soaps; salt water, olive oil and palm oil solid soaps; and various types of toilet soaps.

Detergents for which there are specifications include: borax; soda ash; soda, caustic; soda, modified; sodium bicarbonate, metasilicate, and sesquisilicate; trisodium phosphate; and tetrasodium pyrophosphate.

The test methods and analytical procedures which comprise a considerable portion of the book, cover the sampling and chemical analysis of soaps and soap products, special detergents, sulfonated and sulfated oils, and metal cleaning composition. There are tests covering corrosion of water soluble aluminum cleaners, and a series of definitions of terms relating to soaps and other detergents.

Copies of this 180-page compilation, with heavy paper cover, may be procured from A.S.T.M. Headquarters, 1916 Race St., Philadelphia 3, Pa., at $2.00 each.



Sketch of typical Brine-O-Lator installation.

Brine-O-Lator

A new machine that is said to be easily adaptable to any requirements for brine, has been developed by Carey Salt Co., of Hutchinson, Kansas. Designated the Carey Brine-O-Lator, the new unit is said to reduce salt consumption, labor cost, and zeolite replacements when used in conjunction with a zeolite water softening system.

The operation of the unit is described as follows: The salt supply is continuous and self-feeding from the hopper connected to the top of the machine. Fresh water enters through perforations in the spray header at the top of the unit and percolates downward through the salt.

Dissolution of the salt is greatest nearest the top and ceases a few inches above the bottom. At this plane the brine is fully saturated. The salt in the bottom of the unit is therefore not dissolved. This undissolved salt remains to act as a natural filter bed through which the brine must pass to enter the inverted brine collecting chamber.

Automatic operation is obtained by the float valve arrangement located on the right side of the unit. While maintaining a constant hydrostatic head within the unit, the float valve automatically opens when brine is withdrawn and closes when the brine is shut off.

After a substantial volume of the salt has been dissolved, it is necessary to flush out the insoluble residue which has been filtered out within the unit. The design of the unit is such that this can be done easily and efficiently.

Single-Phase Induction Motor

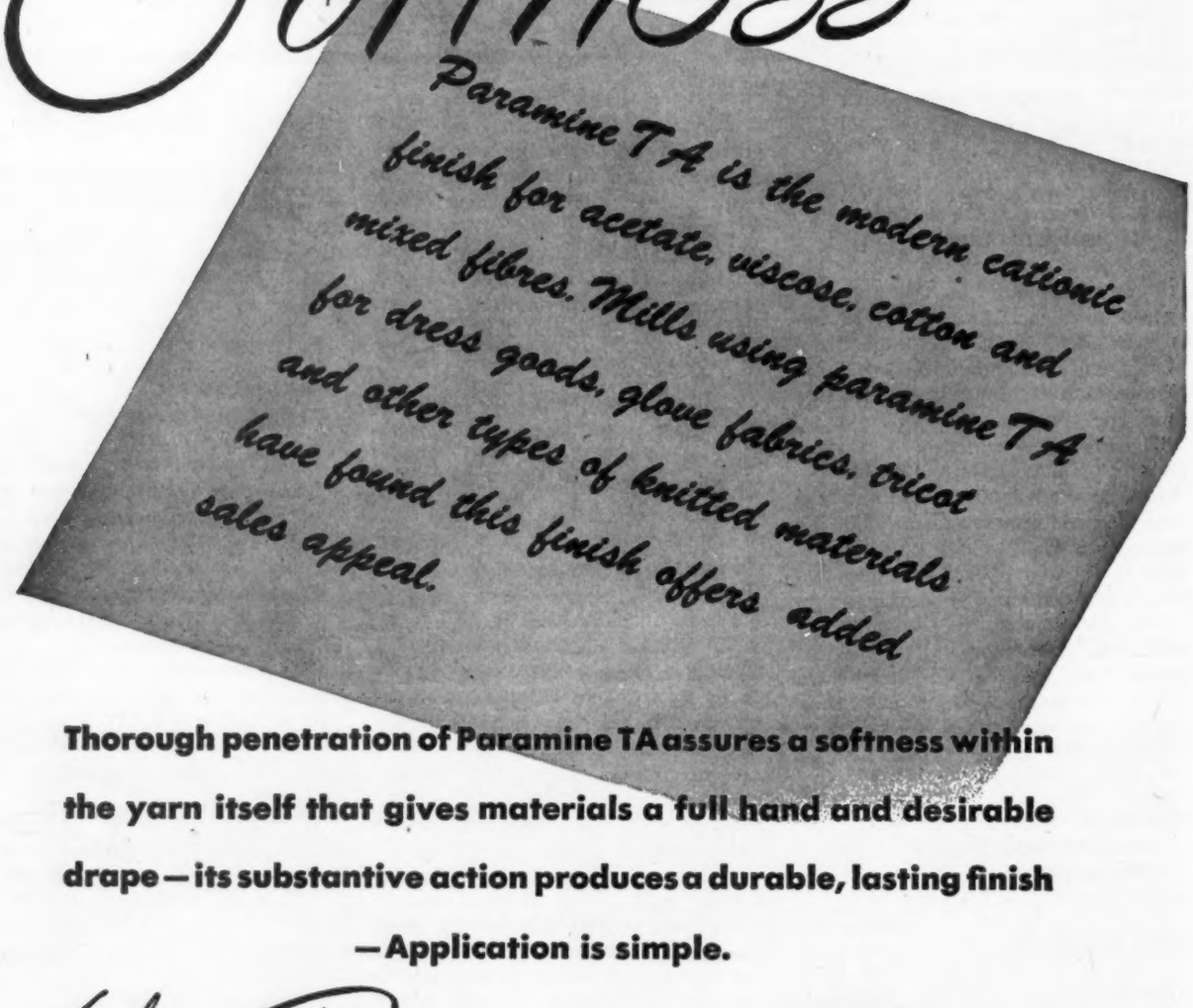
A capacitor-start, single-phase squirrel-cage motor has been developed by Westinghouse Electric Corp., Pittsburgh 30, Pa. It is sturdy; its windings are rugged; the bearings are pre-lubricated and require no attention for at least five years, according to the manufacturer.

The new motor has high torque values all the way up from standstill to full speed. It is electrically reversible and its characteristics fixed, not subject to change by brush shift.

A centrifugal switch of improved design manufactured under close tolerances is used on motors rated one to three hp inclusive at 1750 rpm and 1½ to five hp at 3600 rpm. On larger ratings, or special mountings,

IF YOU WANT

DURABLE *Softness*


Paramine TA is the modern cationic
finish for acetate, viscose, cotton and
mixed fibres. Mills using paramine TA
for dress goods, glove fabrics, tricot
and other types of knitted materials
have found this finish offers added
sales appeal.

Thorough penetration of Paramine TA assures a softness within the yarn itself that gives materials a full hand and desirable drape—its substantive action produces a durable, lasting finish —Application is simple.

Use Paramine TA

*Reg. U. S. Pat. Off.

WRITE FOR DETAILS OR DEMONSTRATION

Arkansas Co. INC.

Manufacturers of Industrial Chemicals for Over 40 Years

NEWARK, NEW JERSEY

a newly developed relay is used. The switch consists of a rotating governor on the shaft which actuates a set of contacts in one of the end brackets. The relay is a multiple unit specially developed to provide protection against undesirable dynamic braking when the motor is de-energized. Proper operation is obtained over a wide range of operating voltage.

The capacitors are mounted in the conduit box, a location easily accessible and providing a low ambient temperature. A novel stator winding using lap wound coils grouped to provide the required distribution was developed for this motor.

Inherent protection is available, when desired, by adding a thermoguard which responds to the temperature of the motor. This device is mounted in the frame under the conduit box. Either manual or automatic reset thermoguards can be supplied.

Wool Oil

Procter & Gamble, Textile Division, P. O. Box 599, Cincinnati 1, Ohio, has announced the availability of Proxol, a new wool oil prepared to satisfy the demands of the picker, carder, spinner, knitter or weaver, as well as the wet finisher and dyer. The product is described as a "multi-quality" lubricant having many unusual advantages.

It is reported that with this new product emulsions can be readily prepared, emulsion particles are small, and stability of the emulsion is great. It is claimed that Proxol does not oxidize during storage in the cloth to ultimately cause poor scouring, streaks, blotches and undesirable odors.

Wire Rope Hoist

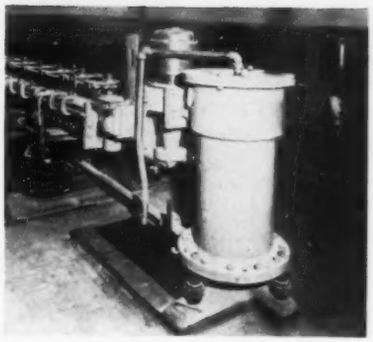
The Yale & Towne Manufacturing Co., 4530 Tacony St., Philadelphia 24, Pa., has announced a new line of wire rope hoists, designed to bring the advantages of cable and drum hoisting to a wide industry group.

The new light-duty hoist will be known as the "Load King," and will be available in ¼, ½, and 1-ton capacities.

The frame of the portable hoist is a heavy, one-piece, ribbed-steel casting, constructed for use with lug, plain trolley, motor trolley, or winch-type mounting.

The quick-lifting hoist is equipped with a large diameter drum with machine-cut grooves for guiding the cable as it winds. The drum has sufficient capacity to provide for full standard lift without overlapping of cable.

The specially designed reversing type motor is rated to operate under constant service with full load without destructive overheating.



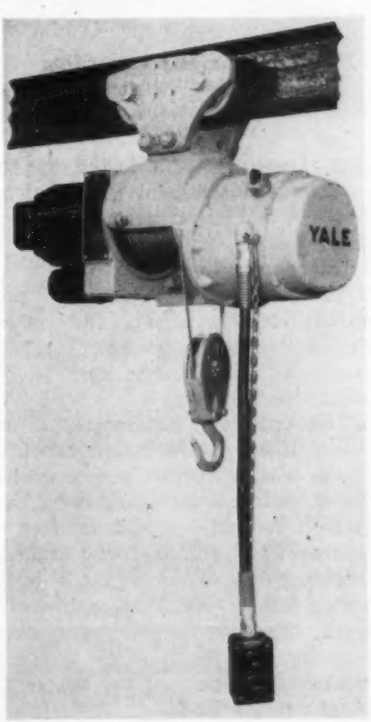
Shown here is a stationary mercury cell for the electrolytic production of pure 50% caustic soda, as installed at the Aluminum Co. of Canada, Arvida, Quebec. The cell was developed by Mathieson Alkali Works, with some changes and improvements contributed by Alcan's engineering staff. For description of cell, see September 1947 issue of "Textile Industries," page 142.

"Thick-and-Thin" Rayon Yarn

A new "Thick-and-Thin" Du Pont rayon yarn, which is said to permit greater variation of texture in home furnishings fabrics, has been developed by the Rayon Division of the Du Pont Company.

The new yarn combines effectively with other types of yarns and has textural value for many kinds of decorative fabrics, according to the announcement. In satins, taffetas, twills and damasks, it emphasizes the versatility of rayon yarns, producing unusual irregularities of surface and interesting highlights. Single-color fabrics gain a two-tone appearance and stripes become more decorative with texture added to color, according to Du Pont.

"Load King" wire rope hoist.



100% Boar Bristle Paint Brush

The Fuller Brush Company, Hartford 2, Conn., has recently announced a new line of paint brushes designed particularly for industrial purposes.

All of the brushes are filled with 100% boar bristle which is characterized by "flag ends" that overlap to form tiny paint pockets or reservoirs. With paint stored in these pockets, brushing action squeezes the paint onto a surface in a smooth coat.

Bristles are fastened in a vulcanized rubber base and attached to a lacquered handle by stainless steel and nickel-plated ferrules.

The line includes wall, stucco, varnish, and sash and trim brushes in sizes commonly favored by industrial plants, according to the manufacturer.

Polishing Compound for Thread Guides

Hyprez diamond compounds are now being used in the textile industry for polishing and refinishing of thread guides, machine parts, etc., according to a recent announcement by Hyprez Division of Engis Equipment Co., 431 South Dearborn St., Chicago 5, Ill.

The abrasive content of this product consists of clean, accurately-graded diamond powders, uniformly distributed and permanently suspended in a stable compound of identifying integral color, according to the announcement.

Sealed in dust-proof glass cartridges, the compound is loaded into the Hyprez applicator gun which may be equipped with a standard nozzle that extrudes exactly metered amounts, or with a reduction needle that dispenses the compound in pinpoint quantities for fine work.

The manufacturer claims that the

Hyprez method permits effective and reliable finishing, as well as simple and quick re-polishing in maintenance with such materials as stainless steel, steel, sapphire, tungsten-carbide, ceramics, etc.

Power Lift Truck

Revolvator Co., North Bergen, N. J., has recently announced a new walk-along power lift truck which has been designated the "Go-Getter."

The truck is stream-lined, self-contained with adjustments within easy access, and powerful. It is reported to be one of the shortest trucks of its type on the market, being 27½" between control handle and back of battery.

The truck has a modern single package hydraulic lift unit on which all adjustments can be made from the outside. To simplify maintenance or repairs, the hydraulic or power unit can be easily removed from the body.

The platform truck comes in 4000 and 6000 lb. capacities. Heights available are 7", 9" or 11". Lengths are 36", 48", 54", 60", 72" and over, with 26½" width. The platform will raise a full 4". Six-inch height is available under certain conditions. An under-clearance of 3½" avoids hanging on ramps or aprons.

The truck operates on a 6 cell, 13 plate battery which gives normal 8-hour operation.

Front wheels are dual wheels with demountable rubber tires. On the platform trucks the rear wheels have the same diameter as the lowered platform height. All wheels have moulded rubber treads.

Infrared Recording Spectrophotometer

Baird Associates, Inc., 33 University Road, Cambridge, Mass., recently announced the development of an infrared recording spectrophotometer which is reported to have already found application in the chemical and dyestuffs fields.

The instrument is a double-beam device, operating on the "null" principle. It gives a complete recorded analysis of complicated components of solids, liquids, and gases having infrared absorption characteristics.

One beam of infrared radiation passes through the sample under study; the other passes through a compensating cell. If the sample under study absorbs radiation, the two beams become unequal. The magnitude of this inequality is a measure of the transmission of the sample.

A bolometer—sensitive to the inequality between the two beams—controls, through an amplifier and mechanical drive system, the position of a shutter. The purpose of this shutter is to equalize the two infrared beams reaching the bolometer, thus establishing and maintaining an optical null. The position of this shutter is a measure of the transmission of the sample. Consequently, a suitable mechanical connection from the shutter to the pointer and recording pen enables the instrument to indicate and record per cent transmission directly.

Motor-Driven Psychrometer

An electric humidity measuring device has been announced by the Minneapolis - Honeywell Regulator Company, Minneapolis, Minn.

Reading temperature deviations within one-fifth of a degree, the motor-driven instrument uses matched wet and dry bulb thermometers with scale readings from 40° F. to 120° F.

Electric humidity recording instrument with accessories.

Included with the instrument is a large and specially prepared phychrometric chart so that the wet and dry temperature readings may be translated into precise relative humidity percentages.

The complete instrument, in addition to the psychrometric chart, includes a wick, thread, scissors, a bottle of distilled water, carrying case, and—if desired—an adapter over the thermometer bulbs of the matched thermometers so a tube could be inserted into an enclosure such as duct work, thus obtaining humidity readings by drawing the air from the enclosure by use of the fan of the psychrometer itself.

Dry Chemical Fire Extinguisher

A new extinguisher designed to combine high efficiency under most conditions with maximum protection to the user and to equipment installations, has been announced by All-out Mfg. Corp. of New York, N.Y.

The dry chemical is ejected, under pressure, in a flat stream that separates the flame from the burning material, instantly forming a dense, fire-smothering cloud over a flaming area up to a distance of 18 feet, it is stated.

Features claimed for the new extinguisher include: no toxic gases formed, non-conductor of electricity, non-abrasive, harmless to finished surfaces, easily removed with a brush, squeeze grip nozzle for positive control, light weight permits easy carrying and use by men and women operators, chemical will not deteriorate, easily recharged without use of special tools, pressure hose permits rapid maneuverability of dry chemical stream, perfectly harmless to personnel.

Boiler Control Method

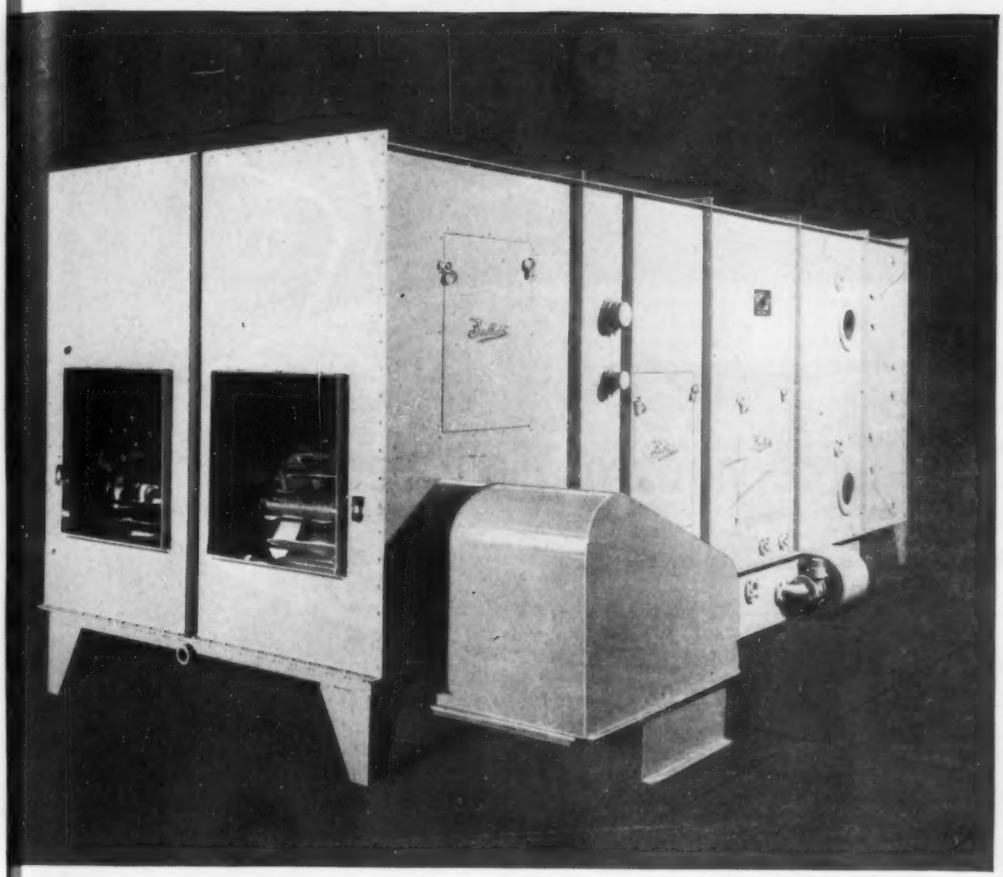
Bailey Meter Company, 1050 Ivanhoe Road, Cleveland 10, Ohio, has developed a method of controlling combustion in hog fuel-fired boilers by the brilliancy of the flame, furnace wall or fuel bed.

The new system utilizes a standard arrangement in that forced draft is controlled from steam pressure, induced draft is controlled from furnace draft, and fuel feed is controlled from steam flow; but differs in that the fuel feed is readjusted by brilliancy instead of by steam flow-air flow ratio. Brilliancy is measured by a photo-voltaic cell connected to a Bailey Pyrotron pyrometer.

In this new type of control, a steam flow meter measuring boiler output proportions fuel feed to steam flow. It does this by setting up an air loading pressure which actuates the fuel feed control drive. The air loading pressure from the steam flow meter is combined with the air loading pressure set up by the brilliancy meter in an air relay to form an average air loading pressure. This is transmitted to the fuel feed control drive.

If the flame brightens it is a sign of an excess of combustion air and the fuel feed is increased gradually until the flame darkens to the required brilliancy. If the flame tends to darken it is a sign of a deficiency of combustion air and the fuel feed

AIR EQUIPMENT TO HELP YOUR BUSINESS



"Buffalo" PCGW Wet Glass Cell Air Washer with Tempering and Rehoating Coils

Washed Air

PROPERLY TEMPERED

AND HUMIDIFIED for better product control

● Here is controlled air, adjusted to your process and comfort needs! "Buffalo" Wet Glass Cell Washers draw your air through a dense curtain of atomized water and through wetted, finely divided spun glass filter packs — remove 98.5% of all dust visible without magnification. This thorough cleaning pays for itself where processes depend on dust-free air.

PROVISIONS for HEATING

These PCGW Cabinets have spaces for either hot water or steam type heating coils. And if your process requires cooling in addition to cleaning and heating, there are "Buffalo" PC units for that. For complete information, write for Bulletins 3457 and 502A.

BUFFALO FORGE COMPANY

175 Mortimer Street Buffalo, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

FANS by "Buffalo"

EQUIPMENT FOR

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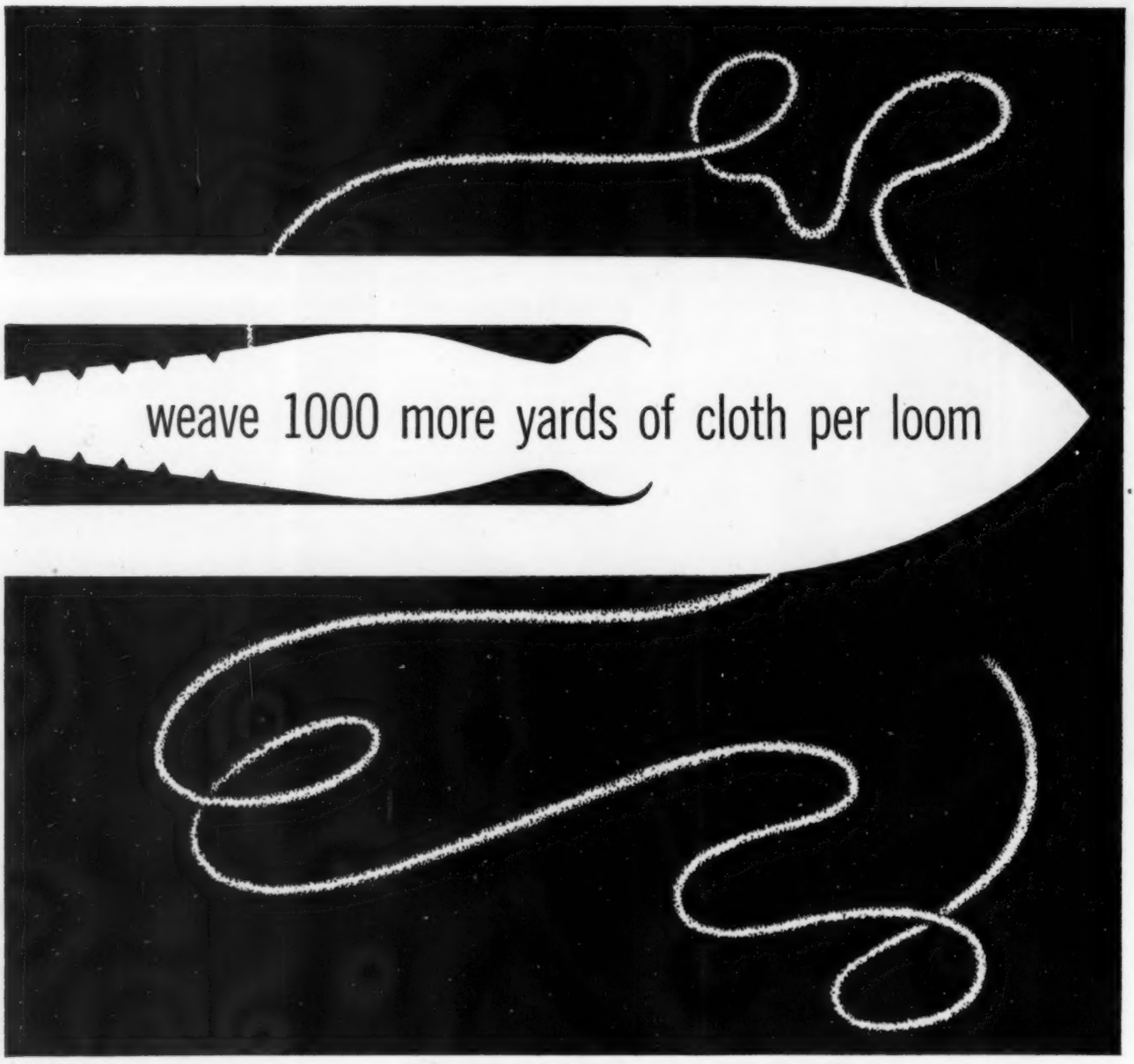
- ★ HEATING
- ★ COMFORT COOLING
- ★ PROCESS COOLING
- ★ AIR TEMPERING
- ★ AIR WASHING
- ★ EXHAUSTING
- ★ BLOWING
- ★ FORCED DRAFT
- ★ INDUCED DRAFT
- ★ PRESSURE BLOWING
- ★ CLEANING
- ★ DRYING

CUTTING AIR COSTS IN EVERY BRANCH OF INDUSTRY



Impossible? Not when your weave room has a new, modern air conditioning system.

One Southern mill was weaving 32,000 yards of cloth per loom per year before it modernized its air conditioning with a Carrier evaporative cooling system. The strict control of humidity and the better control of temperature made possible by this improved Carrier system increased production 3 per cent per loom. Figured against the current selling price of cloth, an increase like this makes the cost of installing and operating a new air conditioning system one of the soundest investments open to a textile mill.

And the benefits of modern air conditioning go far beyond a boost in production. Because all the air is cleaned, the product is cleaner and there are fewer seconds. Workmanship is better all around because a properly air conditioned mill attracts a better type of employee and reduces employee turnover.

As with any type of installation, air conditioning for the textile mill must be engineered with a thorough knowledge of the industry. Carrier engineers pioneered the air conditioning of textile mills and work constantly with leaders in the field. This unrivaled experience is your assurance of efficient, low-cost air conditioning. Carrier Corporation, Syracuse, New York.

Carrier AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

is correspondingly decreased. A darkening of the flame also occurs when a wet fuel is fed on top of a dry fuel; the fuel feed then slows until burning resumes.

Foot Switch

A foot switch that is specially constructed to answer the problem of operator fatigue, is now available from Black & Webster, Inc., 126 Massachusetts Avenue, Boston, Mass. Called the Model SA, this new switch has its pivot located under the arch of the foot so that it operates with a rocking instead of a pushing motion.

The SA switch is made from a rugged aluminum casting and has a polished finish that will not rust. It is bright enough to be seen easily under dark work benches. The entire switch weighs only 2¼ pounds and measures 9" long, 3½" wide, 2½" high. Provision is made for fastening the switch to the floor or other surfaces where it is desirable. Clamp furnished with the switch fits either BX or heavy-duty rubber cord.

Handbook on Plastics

Standard information on plastics and the best practices of the plastics industry is now available in the *Handbook of The Society of The Plastics Industry* which was recently published by the Society of the Plastics Industry, 295 Madison Ave., New York, N. Y. (Free to members. $7.50 to others.)

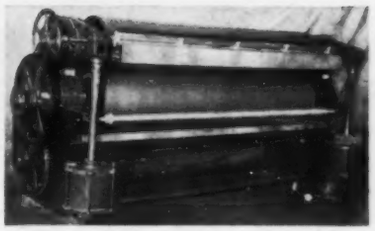
The 451-page volume contains chapters on the following subjects: Classification of plastics molding materials; molding and forming plastics parts; design of molded articles; design standards for inserts; standards for tolerances on molded plastics parts; cementing and assembly of plastics; testing plastics parts; mold design and recommended steels; machining and finishing plastics parts; and laminated products and their fabrication.

There are over 500 charts and illustrations in the book.

Aluminum Skid Platforms

Double corrugated one-piece skid platforms, made of aluminum, have been announced by the Union Metal Manufacturing Company, Canton, Ohio.

The double corrugations consist of two recessed corrugations joined by a raised center rib. The raised center rib between the two corrugations acts as a built-in knee brace, thus strengthening the legs and greatly reducing the danger of their being bent outward by power truck abuse. Another advantage claimed is that blows and bumps are absorbed by the knees. With this type construction the knee becomes the strongest part of the skid platform.



This new roller bearing heavy extracting squeeze roll unit was recently announced by Birch Brothers, Inc., 32 Kent St., Somerville, Mass. The machine is built in all widths with rubber covered squeeze rolls, and the shafts are extra large. The unit is regularly furnished with flock brush, stainless steel flock tray and pan under the squeeze rolls. It may be equipped with either constant speed or variable speed drive. Pressures up to 30,000 lbs., either hydraulically or pneumatically, are obtainable.

Solenoid Valve

The Airmatic Valve, Inc., 1643 E. 40th St., Cleveland, Ohio, has developed a non-corrosive, full capacity 3-way direct operating solenoid controlled valve Model DS-3.

This newly-designed high speed solenoid valve eliminates pilots, levers, distributors and all other types of "indirect control," according to the manufacturer. It can be mounted in any position and can be operated continuously without harm to the valve or solenoid. The solenoid is rated 1.42 amperes inrush, .22 amperes holding at 110 volts, 60 cycles.

The valve is furnished in four standard pipe sizes: ¼", ⅜", ½" and ¾".

Impregnated Bronze Bearing for Regular Spinning

The Dixon Lubricating Saddle Company of Bristol, Rhode Island, has announced the development of a new bearing for regular spinning.

Known as Lubronze, it is a bronze insertion, impregnated with graphite, oil and other materials, fixed in the saddle at the point where the latter bears on the front roll. A smooth bearing surface and reserve lubrication are provided.

With its reserve qualities, the bearing does not eliminate the need for lubrication, but takes over the oiling job when unavoidable delays occur, according to the manufacturer.

Cold Process Water Conditioner

A unit for conditioning of process cooling water and boiler feed which combines the basic elements of equipment for mixing, floc formation, settling, and thickening in a single reaction vessel, was recently developed by Cochrane Corporation, 17th St. & Allegheny Ave., Philadelphia 32, Pa. Chemical reagents may be introduced for coagulation of turbidity alone, for partial softening with coincident turbidity reduction, or for complete softening and turbidity reduction.

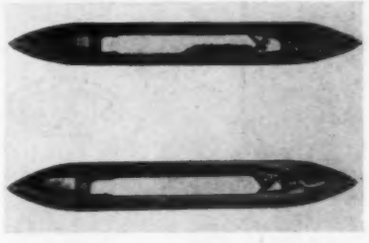
In the Cochrane Rapid Reactor, raw water is introduced into an environment of chemical reagents and pre-formed precipitates, thoroughly agitated, discharged into a zone of relative quiescense at a controlled velocity, and finally passed into an integral settling and thickening reservoir from which it is collected for use.

Shuttle for High Speed Looms

Southern Shuttles Division of Steel Heddle Mfg. Co., Greenville, S. C., has placed on the market a shuttle designed specifically for high speed looms.

Tempered dogwood is used for the body of the shuttle. To guard against the tip becoming loose, a new method of inserting it into the wood was developed, the announcement said. A special one-piece eye has been developed for this shuttle that is reported to feed and take faster delivery of yarn and eliminate ballooning or looping troubles.

The side thread guide is made of a special steel and is carbonized and heat treated. Its strength and precision hold it in the wood as an integral and positive part of the shuttle, according to the manufacturer.



Above, shuttle for X-L loom. Below, shuttle for X2 loom.

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The Weaver's Friend

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RODA — High grade gas, by-product and steam coal from Wise County, Va., on the Interstate Railroad.

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PREMIX STOKER — A laboratory controlled product blended to meet exacting stoker requirements. From Wise County, Va., on the Interstate Railroad.

COKE — Roda and Stonega from Wise County, Va., and Connellsville Coke from Pennsylvania.

CRITERION COAL — High grade gas, by-product, steam and domestic coal—Pittsburgh seam from Irwin Basin, Westmoreland County, Pennsylvania, on the Penna. Railroad.

CROZER — Genuine Third Vein Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.

LYNCO — High fusion coking coal for by-product, industrial stoker and pulverizer use from Wyoming Co., W. Va., on the Vgn. Ry.

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Our personnel with the experience gained through long and varied marketing activity assures effective servicing of any fuel requirement.

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Bound Brook, New Jersey
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

NEW WOOL DYES WITH IMPROVED FASTNESS

The increasing demand for shades of better fastness to light and washing on certain types of wool materials has resulted in the development of a process for the application of the complete line of Calco Indigoid and Anthraquinone Vat Dyes to these materials. Vat-dyed shades can be produced which exhibit extraordinary fastness to light, even in pale shades, as well as excellent fastness to washing, perspiration, salt water, cross dyeing, fulling, etc. Such shades are of particular interest to manufacturers of automotive upholstery fabrics, knitting yarns, carpet yarns and blankets. Lack of brightness had been a handicap in some cases; and where acid, chrome and metallized wool dyes were used, they provided inadequate light and wash fastness.

Desirable Physical Properties Retained

The practicality of this process of applying vat dyes to wool has been proved during the routine dyeing of thousands of pounds of material. The desirable physical characteristics of the wool are well preserved. For example, wool slubbing dyed by this process has a softer, more lofty feel, better spinning qualities, and more tensile strength than the same material which has been dyed by the usual methods.

At the present time vat dyes can be applied to wool in the form of stock slubbing, tops and yarn. Piece goods cannot be dyed due to lack of suitable equipment for the mechanical handling of the cloth without tension and in the open width.

The cost of vat-dyeing of wool is higher than that of ordinary wool dyeing procedures, but the advantages more than offset the extra costs.

Practically all Calco vat dyes can be applied to wool by various recommended methods, but those especially adaptable because they produce shades of better than average fastness to light include:

*Calcoloid† Yellow GCD Paste
*Calcosol† Yellow G Double Paste
*Calcoloid Golden Orange GD Paste
*Calcoloid Golden Orange RRTD Paste
Calcoloid Flaming Orange 2R Paste
*Calcoloid Orange RD Paste
Calcosol Scarlet B 100% Powder
*Calcoloid Pink FFD Paste
Calcosol Pink FB Double Powder
*Calcosol Red BN Double Paste
Calcoloid Violet 6RD Paste
*Calcoloid Blue BLD Double Paste
*Calcosol Blue GCD Double Paste
Calcosol Blue 2BD Powder
*Calcosol Blue 3G Paste
Calcosol Navy Blue Paste
*Calcosol Jade Green N Double Paste
Calcosol Olive Green BN Double Paste
*Calcosol Brown R Paste
Calcosol Brown RRD Paste
*Calcosol Copper Brown Paste
*Calcosol Gray 2G Double Paste
*Calcoloid Black BBD Double Paste

*Powder type also available †Trade-mark

The process for applying vat dyes to wool is simple and easy to carry out, the dyeing time is short, and steam consumption is low. Either the pigment method or the reduced method can be used. A protective agent for the wool is usually employed, and for this purpose the ligno-sulfonates, by-products of the paper industry, are suitable. Caustic soda or trisodium phosphate is used as the alkali.

Typical of commercial procedure is the dyeing of wool slubbing in top form which is carried out on various forms of top dyeing machines or on perforated spools in machines of the Abbot type.

Calco has worked out procedures and formulae to be followed for achieving best results in dyeing various types of wools. These are applicable to stock and package dyeing, with only the slight change in procedure required by the specific types of machines. Full information is available on request.

A New Cotton Dye

CALCOLOID COPPER BROWN DOUBLE POWDER

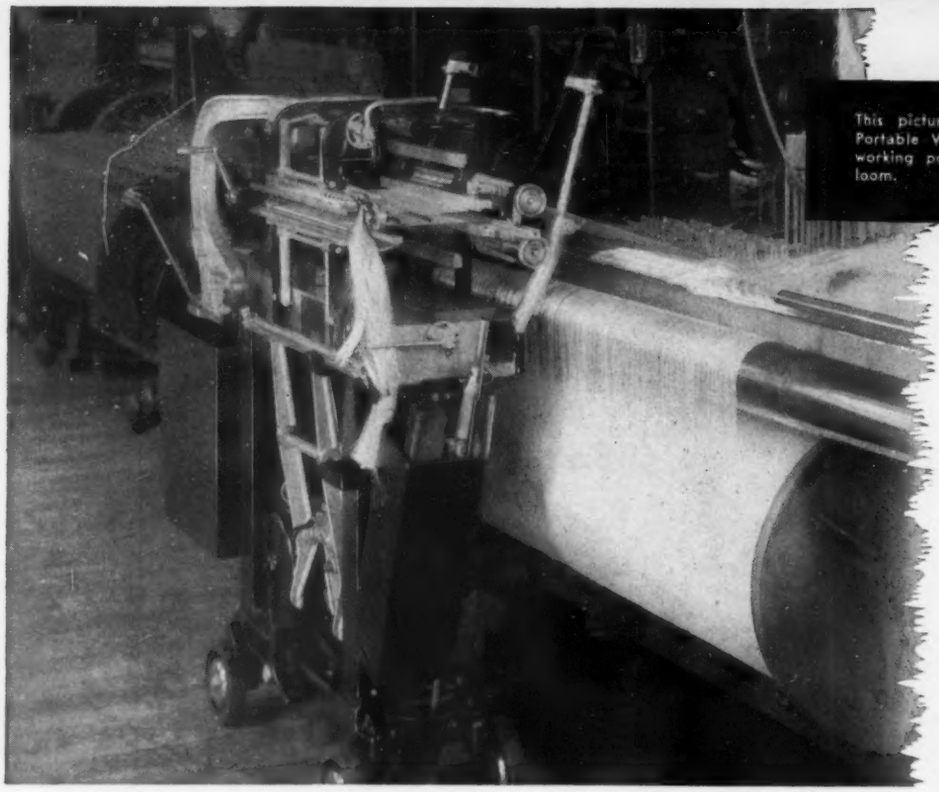
Calco has now developed a dispersible powder, double strength, in the new Copper Brown shade which it introduced some months ago as a paste. This type is especially desirable for use in mills preferring a powder type to prevent drying out in the drug room. It also facilitates the weighing out of small quantities.

Calcoloid Copper Brown Double Powder is recommended for package dyeing either by the reduced method or pigment method when dyed at 140° F. or slightly lower. It possesses excellent working properties on cotton, dyes well on yarn, raw stock, piece goods and package machine. Light shades will stand 40 hours' Fadeometer exposure. It also gives good fastness to light, washing and bleaching. It imparts very good light fastness to wool tops and slubbing, and it is suitable as a shading element for automotive shades.

FOR THE TEXTILE BOOKSHELF

Studies of Wool Dyeing (Calco Technical Bulletin No. 794) explains in detail the Calcomet process and discusses various methods for applying chrome colors. The Calcomet method has many advantages over other methods in producing better fiber levelness.

"They've tried everything—but I think that trick'll get 'em a new car hands down!"



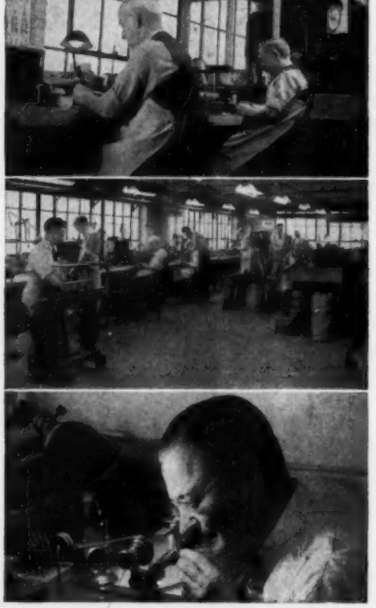
This picture shows a Barber-Colman Portable Warp Tying Machine in the working position, directly behind the loom.

BARBER-COLMAN WARP TYING MACHINES ARE BACKED BY 40 YEARS OF EXPERIENCE

DESIGN. Shortly after the turn of the century, Barber-Colman introduced several machines which have proved to be outstanding contributions toward improvement in the textile art. Among them is the Portable Warp Tying Machine, specially designed to work directly back of the loom. This machine is so light in weight as to be easily and quickly transportable from loom to loom throughout the weave shed.

REPAIR PARTS. As on any machine, certain parts in time show wear and must be replaced. Modern manufacturing methods set up standards and tolerances for the making of these parts so that any replacement is exactly interchangeable with the original piece. Barber-Colman Company maintains a skillfully-staffed department to make and stock those units which, experience shows, are in most demand. In addition, supplementary stocks are maintained at the company's branch offices to provide best-possible delivery from strategically-located centers.

SERVICE. No machine made can function without Service. Experienced Service Men must be available to explain and demonstrate the working of the machine when it is delivered, and must be on call if trouble develops to determine the cause of any failure, make necessary adjustments, and revitalize the productive functions of the machine. There are Barber-Colman men ready and willing at all times to answer promptly any call for assistance, and to make sure that Barber-Colman machines are on the job as near 100% of the time as possible.



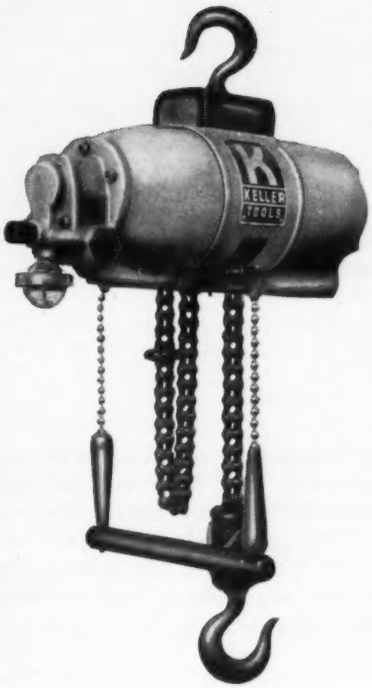
These pictures, taken in the Barber-Colman plant, show a few of the skilled mechanics whose experience and aptitudes contribute vitally to the quality and performance of Barber-Colman machines.

AUTOMATIC SPOOLERS-SUPER-SPEED WARPERS-WARP TYING MACHINES-DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND



Air Operated Hoist

Keller Tool Company, Grand Haven, Michigan, has announced the production of a one-ton capacity air hoist, known as Model 86-2V20.

It is compact, ruggedly built, and is described as embodying the same construction features of Keller 500- and 1000-pound hoists. These features include variable speeds which give the operator full control of positioning, lowering, or raising the load at any desired speed from creep to 17 feet per minute. Standard length of lift is 8 feet.

Built-in safety features include safety stops, high-grade alloy steel roller chains, drop forged swivel hooks. Power is furnished by specially designed vertical piston type air motor.

The unit weighs only 75 pounds.

Measuring and Examining Machine

The 1948 model progressive measuring and examining machine, announced by B. J. Phillips Co., 475 Fifth Ave., New York City, has special features which include a standard 64" wide roller to handle all materials up to 60" wide; forward and reverse drive; variable clutch motor that permits a maximum variation in speeds from extremely slow for inspection to rapid for measurement; fully chromed bars; silent sealed bearings; and a better visibility examining board.

A removable doubling attachment is also available for folding material as required for retail needs.

Self-Contained Water Cooler

A new self-contained, 10-gallon capacity drinking water cooler, featuring an all stainless steel top and drain assembly and an automatic water-flow regulator, is now being manufactured by Temprite Products Corporation, 47 Piquette Avenue, Detroit 2, Michigan.

Top and drain assembly is constructed of stainless steel and incorporates an anti-splash guard. The bubbler was designed to give maximum sanitary protection. It is impossible for the user's lips to come into direct contact with the water nozzle. Waste water will fall only into the basin; not on the nozzle, the manufacturer states.

Water flow is automatically regulated to provide a stream of drinking water without annoying fluctuations. This constant rate of flow is said to be unaffected by outside water pressure variations.

Cooler and storage tanks are constructed of 18-8 stainless steel. Water is directed to the bottom of the cooler and leaves through the top, eliminating any possibility of trapped air in the system, it is claimed. The storage tank design is said to prevent cooler damage in the event of an accidental freeze-up. Cooler and storage tanks are sealed in an insulated cabinet, protected against moisture.

The Temprite cooler may be obtained with either hermetic or open type condensing units to handle special or unusual applications. A glass-filler attachment is available as optional equipment.

Woolen Slasher Cloth

A wool slasher cloth is now being manufactured by Chatham Mfg. Co., Elkin, N. C., according to a recent announcement. It is understood that the cloth has been tested in some of the largest mills in the country and has been reported to give exceptionally long service.

Oliver D. Landis Co., Charlotte, N. C., has been appointed exclusive distributor of the cloth in the United States.

Material Positioning Machine

A new, light weight, ruggedly built machine which enables the correct positioning of material rapidly, has been announced by Spinelli Machine Co., 28 Twenty-Second Ave., Paterson 3, N. J. This machine enables the laying of silk tie and dress goods (or other similar materials) preparatory to the printing operation in a perfectly straight and even manner, without wrinkles, according to the manufacturer.

This machine's light weight is said to be due to it's all aluminum construction. All moving parts are centered on precision ball bearings. It has adjustable back and forth tension bar, two aluminum positioning rollers, and a self-adjusting roller guide rail device.

Shown above is an Air-Perme-Ator installation that combines heating with humidification, as described on page 149 of the January issue of "Textile Industries." Coils for heating are installed inside the regular humidification unit, and steam is automatically turned on or off by thermostatic control.

Sulphonated Fatty Esters

Commercial production of a new series of sulphonated fatty esters from vegetable sources has been announced by E. F. Drew & Co., Inc., 15 East 26th St., New York 10, N. Y. The new materials are known as Sulphonated Estols.

These products are reported to have excellent color and odor properties, and are free from development of odor and color upon aging. They are available in several grades with properties corresponding to various sulphonated natural oils and sulphonated tallow.

"Union Bonnet" Gate Valve

The Lunkenheimer Co., Cincinnati 14, Ohio has announced a bronze gate valve, known as Fig. 2228, which is reported to provide maximum distortion resistance.

Fig. 2228 is described as a 200 lb. S.P. bronze, double disc "Union Bonnet" gate valve with rising stem and screwed ends. A companion valve, Fig. 2229, is the flange end pattern, rated at 150 lb. S.P. They are made in sizes ¼" - 3".

We dip the knee... We bow the head

TO WHOM? To the leaders of the cotton textile industry the world over—the "Sanforized" licensees! For you are the men who give millions of grateful consumers the honest value they *understand and want*. So...allow us to say good and loud that you rate many, many "Thank you's!" Not only from us, but from every converter, cutter and retailer who offers serviceable cottons.

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AUSTRAL SILK & COTTON MILLS PTY. LIMITED....Melbourne, Australia

BRAZIL

COTONIFICIO RUDOLFO CRESPI.....Rua Javry 89, Sao Paulo, Brazil

SAO PAULO ALPARGATAS, S.A.....Sao Paulo, Brazil

BELGIUM

ALSBERGE & VAN OOST.....Gand, Belgium

CANADA

CANADIAN COTTONS LIMITED.....Montreal, Que., Canada

DOMINION TEXTILE COMPANY, LTD.....Magog, Que., Canada

MONTREAL COTTONS LIMITED.....Valleyfield, Que., Canada

ROBINSON COTTON MILLS, LIMITED.....Toronto 2, Ont., Canada

WABASSO COTTON COMPANY LTD.....Three Rivers, Que., Canada

CHILE

FABRICAS TEXTILES CAUPOLICAN-CHIGUAYANTE, S.A., Chiguayante Mill, Concepcion, Chile

JORGE HIRMAS H.....Santiago, Chile

COLOMBIA

TEJIDOS EL CONDOR, S.A.....Condor Mill, Medellin, Rep. of Colombia

COMPANIA COLOMBIANA DE TEJIDOS, Coltejer Mill, Medellin, Rep. of Colombia

TEJIDOS DE OCCIDENTE, S.A.....Manizales, Rep. of Colombia

CUBA

COMPANIA TEXTILERA ARIGUANABO, S.A.....Havana, Cuba

CZECHOSLOVAKIA

SPOJENÉ ČESKÉ A MORAVSKÉ BAVLNÁŘSKE ZÁVODY, NÁRODNÍ PODNIK, Ústi nad Orlicí
Plant of Česká Trebová, Česká Trebová, Czechoslovakia

CZECHOSLOVAKIA (Continued)

TEXTILNÍ TISKÁRNY, ÚPRAVNY A BAREVNY, NÁRODNÍ PODNIK, Dvur Králové Nad Labem.....Plant of Háje, Háje, Czechoslovakia

VÝCHODOČESKE BAVLNÁŘSKE ZÁVODI, NÁRODNÍ PODNIK, Nachod, Plant of Nachod, Nachod, Czechoslovakia

DENMARK

A/S GRENAA DAMPVAEVERI.....Grenaa, Denmark

BLOCH & ANDRESEN.....Kobenhaven, Denmark

EIRE

SETFAST LIMITED.....3, College Green, Dublin, Eire

FRANCE

SOCIETE ANONYME DE BLANCHIMENTS TEINTURES ET IMPRESSIONS.....3, Rue du Garet, Lyon, France

GILLET-THAON.....23, Rue de Marignan, Paris 8e, France

GREAT BRITAIN

BLEACHERS' ASSOCIATION LIMITED, Blackfriars House, Parsonage, Manchester 3, England

In Eight Plants as Follows

A. C. Bealey & Son Ltd.....Radcliffe, Lancashire, England

T. R. Bridson & Sons Ltd.....Bolton Bleachworks, Bolton, England

Eden & Thwaites, Ltd.....Edgeley Bleachworks, Stockport, Cheshire, England

James Hardcastle & Co., Ltd.....Bradshaw Works, Near Bolton, England

Kirkpatrick Bros. Ltd.....Ballyclare, County Antrim, Northern Ireland

James McHaffie & Son Ltd.....Kirktonfield, Neilston (Near Glasgow), Scotland

John Stanning & Son Ltd.....Leyland Bleachworks, Leyland, Preston, England

Sykes & Company Ltd.....Edgeley Bleachworks, Stockport, Cheshire, England

BRADFORD DYERS' ASSOCIATION, LTD., 39 Well Street, Bradford, England

J. CHADWICK & CO., LTD., Springbrook Works, Oldham, Lancashire, England

DEAKINS, LIMITED.....Egerton Dye Works, Near Bolton, England

DROMONA & MAINE LIMITED..Culleybackey, Co. Antrim, Northern Ireland

WILLIAM FULTON & SONS LTD.....Glenfield Works, Paisley, Scotland

GROVE DYEING CO. LTD.....Littleborough, Lancashire, England

GREAT BRITAIN (Continued)

THE PIN CROFT DYEING & PRINTING CO., Market St., Adlington, Lanc., England
SILVER SPRINGS BLEACHING & DYEING CO., LTD., Timbersbrook, Congleton, Cheshire, England
TOOTAL BROADHURST LEE CO., LTD., 56 Oxford St., Manchester 1, England
YORK STREET FLAX SPINNING CO., LTD.....Belfast, Northern Ireland
J. J. HADFIELD, LTD.....Garrison Bleach & Dye Works, Birch Vale, England
DAVID WHITEHEAD & SONS LTD.....Lower Mill, Rawtenstall, England

HOLLAND

BLIJDENSTEIN & CO., N.V.....Enschede, Holland
KONINKLIJKE STOOMWEVERIJ TE NIJVERDAL N.V., Almelo, Nijverdal, Holland
N. V. NEDERLANDSCHE STOOMBLEEKERIJ.....Nijverdal, Holland
J. F. SCHOLTEN & ZONEN N.V.....Enschede, Holland
VAN HEEK & CO., N.V.....Enschede, Holland

HUNGARY

SAM F. GOLDBERGER & SOHNE A.G.....Budapest, Hungary

INDIA

BINNY & CO. (MADRAS) LIMITED.....Madras, India

ITALY

COTONIFICIO VALLE DI SUSA.....8, Corso Re Umberto, Torina, Italy

MEXICO

ACABADOS MEXICO, S.A.....Tlalpan, Mexico, D.F.
ATOYAC TEXTIL, S.A.....10 Nte. No. 1412, Puebla, Puebla, Mexico
EL GLOBO, S.A., CIA MEXICANA DE TENIDOS ACABADOS Y ESTAMPADOS FRACCIONAMIENTO INDUSTRIAL SAN ANTONIO, Atzcapotzalco, Mexico, D.F.
TEXTILES MONTERREY, S.A.....Monterrey, Estado de Neuvo Leon, Mexico
NACIONAL TEXTIL MANUFACTUERA, S.A...Guadalajara, Jalisco, Mexico
C. NORIEGA Y CIA SUCS. S en C.....Mexico, D.F., Mexico
COMPANIA INDUSTRIAL DE PARRAS, S.A.....Parras, Coahuila, Mexico
COMPANIA INDUSTRIAL VERACRUZANA, S.A., Ciudad Mendoza, Ver., Mexico

NORWAY

TEKSTILFOREDLING A/S—TEFAS.....Oslo, Norway

PALESTINE

KURDANEH TEXTILE WORKS, LTD., c/o "Ata" Textile Co., Ltd., Haifa, Palestine

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INCA COTTON MILL CO.....Lima, Peru
FABRICA DE TEJIDOS "LA UNION" LTDA., Casilla Correo 2066, Lima, Peru
COMPANIAS UNIDAS VITARTE Y VICTORIA, S.A.....Lima, Peru

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BORAS WAEFVERI AKTIEBOLAG.....Boras, Sweden
MANUFAKTUR AKTIE BOLAGET I MALMOE..Box 278, Malmoe, Sweden
MOELNLYCKE VAEFVERIAKTIEBOLAG.....Goeteborg, Sweden

SWITZERLAND

GUGELMANN & CIE. A.G.....Langenthal, Switzerland
HABIS-TEXTIL A.G.....Flawil, Switzerland
HEBERLEIN & CO., A.G.....Wattwil, Switzerland
A.—G. A. & R. MOOS.....Weisslingen, Switzerland
R. MUELLER & CIE. A.G.....Seon, Switzerland
A.—G. CARL WEBER.....Winterthur, Switzerland

SYRIA

ARIDA BROTHERS CORPORATION.....Tripoli, Lebanon, Syria

UNITED STATES

ALABAMA MILLS, INC.....Wetumpka, Ala.
AMERICAN FINISHING COMPANY.....Memphis, Tenn.
APONAUG MANUFACTURING CO.....Kosciusko, Miss.
APPLETON COMPANY, INC.....Anderson, S. C.
THE APPONAUG COMPANY—Division of Mills, Incorporated, Apponaug, R. I.
ARMS TEXTILE MANUFACTURING CO.....Manchester, N. H.
ASHEVILLE COTTON MILLS.....Asheville, N. C.
THE ASPINOOK CORPORATION.....Jewett City, Conn.
AVONDALE MILLS.....Alexander City, Ala.
AVONDALE MILLS.....Pell City, Ala.
AVONDALE MILLS.....Sylacauga, Ala.
JOS. BANCROFT & SONS CO.....Wilmington, Del.
BELLMAN BROOK BLEACHERY CO.....Fairview, N. J.
BRADFORD DYEING ASSOCIATION (USA).....Westerly, R. I.
BROWN MANUFACTURING CO.....Concord, N. C.
CANTON COTTON MILLS.....Canton, Ga.
CHICOPEE MANUFACTURING CORPORATION.....Chicopee Falls, Mass.
CLEARWATER MANUFACTURING CO.....Clearwater, S. C.
CLIFFSIDE MILLS.....Cliffside, N. C.
CONE FINISHING CO.....Greensboro, N. C.
CONE MILLS CORP.—White Oak Mill.....Greensboro, N. C.

UNITED STATES (Continued)

CONE MILLS CORP.—Proximity Mill.....Greensboro, N. C.
CRANSTON PRINT WORKS COMPANY.....Cranston, R. I.
CRANSTON PRINT WORKS COMPANY.....Webster, Mass.
CROMPTON-SHENANDOAH CO.....Waynesboro, Va.
CRYSTAL SPRINGS BLEACHERY.....Chickamauga, Ga.
DAN RIVER MILLS, INCORPORATED.....Danville, Va.
DELTA FINISHING COMPANY.....Frankford, Philadelphia, Pa.
THE ERWIN COTTON MILLS COMPANY.....Cooleemee, N. C.
THE ERWIN COTTON MILLS COMPANY.....Erwin, S. C.
FAIRFOREST COMPANY—Eagle & Phenix Division.....Columbus, Ga.
FAIRFOREST FINISHING CO.....Spartanburg, S. C.
FRUIT OF THE LOOM, INC.....Pontiac, R. I.
GLENLYON PRINT WORKS.....Phillipsdale, R. I.
GOLD-TEX FABRICS CORP.—Mill Division.....Rock Hill, S. C.
GOODALL-SANFORD, INC.....Sanford, Me.
GREAT FALLS BLEACHERY & DYE WORKS, INC.....Somersworth, N. H.
GRANITEVILLE COMPANY—Gregg Division.....Graniteville, S. C.
GRANITEVILLE COMPANY—Sibley-Enterprise Division.....Augusta, Ga.
HAMPTON PRINT WORKS DIV.—(The Aspinook Corp.), Easthampton, Mass.
HANNAH PICKETT MILLS CO.....Rockingham, N. C.
HARTSVILLE PRINT & DYE WORKS.....Hartsville, S. C.
HIGHLAND PARK MANUFACTURING CO.....Charlotte, N. C.
INDUSTRIAL COTTON MILLS CO., INC.....Rock Hill, S. C.
KENDALL MILLS—(Slatersville Finishing Co.).....Walpole, Mass.
KERR BLEACHING & FINISHING WORKS, INC.....Concord, N. C.
LANE COTTON MILLS COMPANY.....New Orleans, La.
LANETT BLEACHERY & DYE WORKS.....West Point, Ga.
THE LAWRENCE PRINT WORKS, INC.....Lawrence, Mass.
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PILOT MILLS CO.....Raleigh, N. C.
PLYMOUTH FINISHING CO., INC.....Fall River, Mass.
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REVOLUTION COTTON MILLS.....Greensboro, N. C.
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SUMTER TEXTILE MILLS.....Sumter, S. C.
SWIFT MANUFACTURING COMPANY.....Columbus, Ga.
TEXAS TEXTILE MILLS.....McKinney, Texas
TEXAS TEXTILE MILLS.....Waco, Texas
TEXTRON-SOUTHERN, INC.—Finishing Div.....Anderson, S. C.
THOMASTON COTTON MILLS.....Thomaston, Ga.
UNION BLEACHERY.....Greenville, S. C.
THE UNITED STATES FINISHING COMPANY.....Norwich, Conn.
THE UTICA WILLOWVALE BLEACHING CO.....Chadwicks, N. Y.
WHITE BROTHERS, INC.....Winchendon Springs, Mass.

URUGUAY

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41

Years

★

AS ELECTRICAL CONTRACTORS
TO THE TEXTILE INDUSTRY

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J. M. CLAYTON COMPANY

Contracting Electrical Engineers

ATLANTA, GEORGIA ESTABLISHED 1907

AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

This department is prepared by a man who is closely identified with the textile industry.

Public Relations

Ask ten textile manufacturers what they think of a particular type of loom and you would get a variety of answers. The same thing would apply if you asked them what they think about a company-owned village or a company-sponsored newspaper. But ask any ten manufacturers what they think of public relations and the chances are that you'll get ten answers which indicate the esteem in which this subject is held.

But it seems to this observer that what Mark Twain said about the weather might also be said about public relations. Everybody talks about public relations, but nobody seems to do much about it.

To many manufacturers, the term "public relations" denotes something good and very desirable which is always just beyond the horizon, just out of reach. It's something every manufacturer is in favor of, just as he is in favor of "free enterprise" and "The American Way of Life," but it's an intangible, nebulous term, which, like Santa Claus, comes to all those who are good.

That attitude is pretty well illustrated by the manufacturer who said that he did not have very good public relations in his community because the editor of the local paper was too radical. That manufacturer was waiting for Santa Claus.

A Way of Life

Now the writer of this column does not claim to know all the answers, or even a substantial portion of them. He only claims to learn a little here and there which he may apply to his own business and which may be of value to you in yours.

If he has learned anything at all about public relations, it is this: Public relations, like charity, begins at home. It is the mirror in which the public sees the reflections of our business and our plant. Abraham Lincoln was right about fooling the people—it's something that can't be done for very long. Eventually, they find us out, and in the end they know us for what we are.

Public relations, then, is not measured in terms of column inches in a newspaper, nor in terms of editorials or radio broadcasts or plant movies. All of these things may be the mediums by which we tell the public, and the employee section of the public, what we are doing and what we are. But public relations cannot be measured in such terms.

In reality, public relations is a way of life. It's the way you or I talk to the loom fixer who has a sick baby. It's the way we reply to the spinner who asks us why the mill doesn't close on New Year's Day. We can say of public relations as we once said of morale in this column—it's a lot of little things.

The Good and the Bad

Once we heard the head of a small mill out in the country complaining that when he made improvements in housing or in plant equipment, he never got any favorable publicity out of it. A few weeks later we heard a newspaper man commenting about this same plant, say that every time he called this plant the reception he got was both rude and unproductive of news, and he was invariably left

★ ★

For Your Next Job — STOP and CONSIDER

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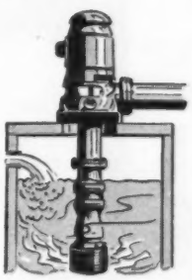
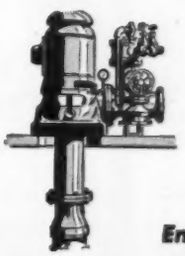
1. AS A DEEP WELL PUMP

For a dependable source of clean water, Peerless Vertical Turbine Pumps are recognized leaders in the field; noted for their adaptability to widest pumping conditions, they embody many exclusive engineering features for extended pumping efficiencies. Install these deep well vertical turbine pumps with the type of drive or combination most suitable to your specific application. Capacities from 15 to 30,000 g.p.m. are obtained from all practicable depths.



2. AS A CLOSE-COUPLED PUMP

You're assured of full turbine pump utility and capacities with an extremely compact installation. Ideal for pumping from short or medium settings. Capacities up to 30,000 g.p.m. are delivered from sumps, pits and surface water sources for booster service, circulating, de-watering and a host of other applications.



3. AS AN APPROVED FIRE PUMP

Install this versatile Peerless Vertical Turbine type Fire Pump, with proper fittings, for a permanent and reliable water supply for adequate plant fire protection. *Underwriters' approved*, these pumps produce from 500 to 2000 g.p.m. against heads to 285 ft. Extremely simplified in piping arrangement.

Engineering Information Available on All Three Vertical Turbine Types

Write to nearest office stating what your pumping conditions are; give diameter and depth of well, distance to water, capacity desired, total head, type of lubrication (oil or water) and type of drive. The bulletin that specifically describes the pump to fit your specific needs, together with appropriate engineering data will be furnished. Plan with Peerless Vertical Turbine Pumps!

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PEERLESS PUMPS

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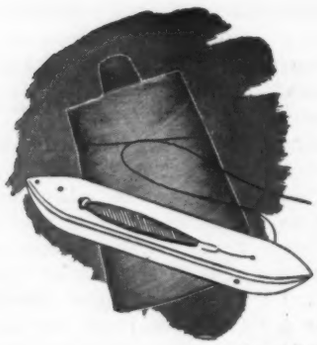

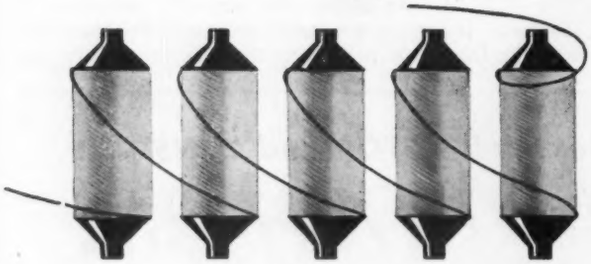

Textile

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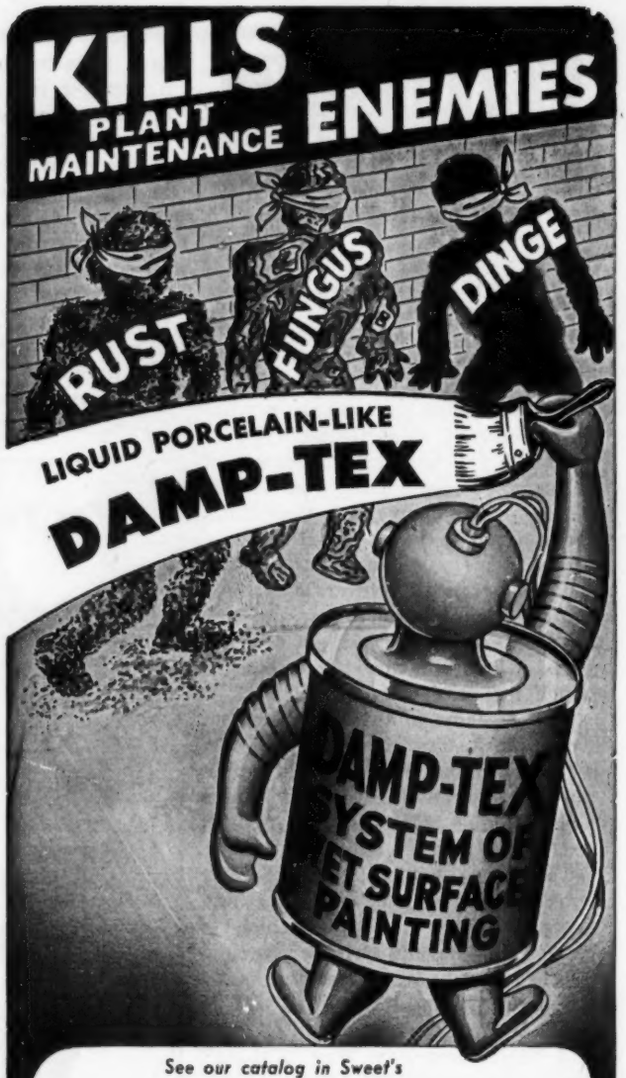

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with Communistic tendencies.

Now everybody knows and understands that there are many things about a business which, for reasons of "administrative privacy," should not be written about in a newspaper or magazine. All the newspaper men we have ever known have understood that fact. But what makes a radical out of an ordinarily conservative reporter, is to go to a plant for a story on a legitimate news event, and to be told—and rather brusquely—that management "has no statement to make."

Having known a good many newspaper men and women, the writer has formed the opinion that they are just about like mill superintendents or mill presidents—they have a job to do, and they try to do it.

In years gone by, the textile industry has built for itself an unenviable reputation in its dealings with the press. We have heard it said by newspaper reporters that textile mill executives are harder to deal with than any other segment of the population. That is a situation of which you and I cannot be very proud.

Fortunately, however, veteran reporters of business news will tell you tremendous improvement has been noted in recent years. They will tell you that many textile executives are doing a magnificent job of public relations and that the old stigma which newspaper people once attached to the industry is slowly disappearing.

What Can You and I Do?

We have said that public relations is really a way of life. What, then, can you and I do if we want better public relations for our plants?

First, we can understand that good public relations, as we have said before, must begin at home. It must begin with our own employees. It must begin with the relations of the second hand toward the overseer and come right on up the line through the chief executive. It must be built around the Golden Rule.

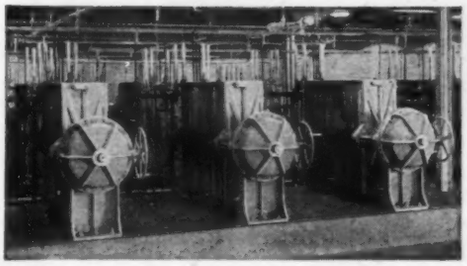
Then we must promote good relations with the people of the community, of the town, of the state. And the best way of doing that is by good citizenship, by taking an active and constructive interest in all efforts for civic improvement.

When we have done these things, and *while* we are doing these things, we can start developing the mediums by which the public is kept informed—the plant newspaper, the local weekly and daily newspaper, the radio, the speeches at luncheon clubs.

By doing these things we shall come to a clearer understanding of the true meaning of public relations.

WEBCELL CONTINUOUS DIALYSER

May Be Your Answer to



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Dialysis is now being used profitably in many fields for the:

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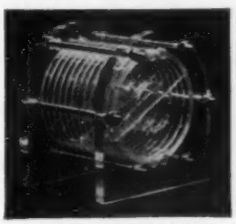
You may be throwing away material that can be turned to your profit through recovery or reuse as a salable by-product or you may wish to remove or purify your product.



(Laboratory Model)
Made of Lucite

The Laboratory Model Webcell Continuous Dialyser is currently being employed in the Research Laboratories of several chemical, food product, biological and pharmaceutical companies in this country and abroad. For those desiring to carry on experimental work in dialysis the Laboratory unit offers the opportunity to study the problem closely.

We suggest that you give consideration to this process as a means of greater efficiency and economy in your plant. Our experience with production equipment has given us valuable information which may be of interest to you toward the solution of your problems.

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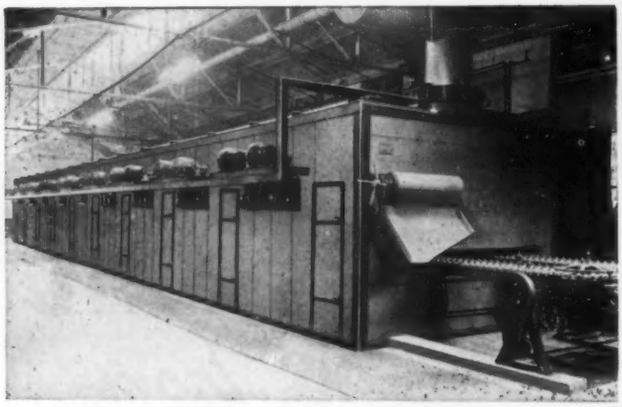

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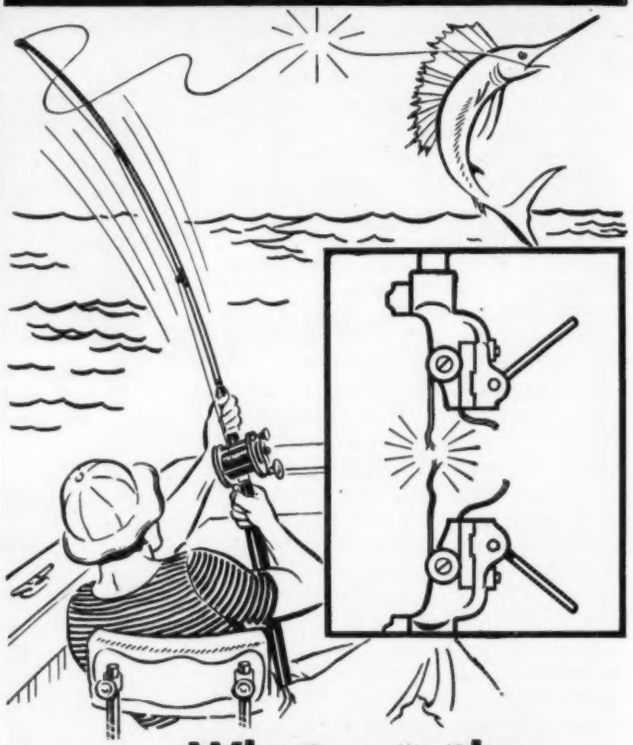

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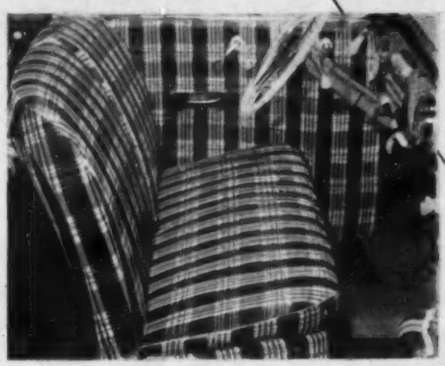

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PERSONAL-NOTES

ABOUT MEN YOU KNOW

ROBERT R. McGEE, former technical supervisor of the U. S. Rubber Company's Reid Mill, Hogansville, Ga., has been appointed to the technical staff of the textile division of that company, with headquarters in New York.

THOMAS E. GOULET, formerly associated with Woodlawn Finishing Co. as superintendent of dyeing, has

joined Maplewood Yarn Mills, Inc., Fall River, Mass., as superintendent of their new package dye plant.

HARVEY E. SULLIVAN, JR., a recent graduate in textile engineering from Georgia Tech, has become associated with the cotton manufacturing department at Crystal Springs Bleachery, Chickamauga, Ga.

JOSEPH P. FOSTER, formerly at the Veterans' Hospital at Oteen, N. C., in charge of personnel relations, and at one time personnel manager of Excelsior Woolen Mills, Union, S. C., has joined Fieldcrest Mills as an assistant to the director of personnel research and training and will be assigned to training activities.

The board of directors of the Dixie Mercerizing Co., Chattanooga, Tenn., has announced the following elections: GEORGE R. WEST, JR., former president, was elevated to chairman of the board; J. BURTON FRIERSON, JR., former vice-president, to president; B. P. BARNES, former superintendent of the mercerizing plant, to vice-president in charge of finishing operations; EUGENE W. HILL, former superintendent of the spinning mill, to vice-president in charge of spinning operations; ARTHUR K. JOHNSON, former treasurer, to vice-president in charge of sales; JOHN B. THOMPSON, former assistant secretary, to secretary and treasurer, and ED-

MATERIAL HANDLING News

Here is the one and only method of handling many types of unit loads that does not require conventional pallets or skids . . . practical to the Nth degree, and destined by its merits to be perpetually modern . . . offers unparalleled opportunities for big savings . . . a method made possible by Clark's revolutionary new handling tool—the PUL-PAC.

The PUL-PAC is a "push-pull" attachment which enables a Clark fork truck to lift, carry and tier many types of material assembled in unit loads based on disposable or durable sheets of corrugated paper, fiber-board or similar inexpensive material.

PULLS THE LOAD ONTO THE LOAD-PLATE

This unique device consists of a vertical sliding rack which travels horizontally above the truck's wide load-plates, with a gripper device at its base. To pick up a load, the rack is moved forward and the gripper opens automatically to receive the projecting

1. Pulling the Load Onto the Load-plate

edge of the load-base sheet. When the rack is retracted, powerful hydraulic pressure closes the gripper firmly upon the load-base sheet; the load then is pulled onto the load-plate. See picture No. 1. Lifting, tilting and lowering are done in the usual manner.

2. Pushing the Load Off at Destination

PUSHES THE LOAD OFF AT DESTINATION

At destination, the operation is reversed. The "push" mechanism is used to hold the load over the desired area while the load-plate is removed.

TIERS UNIT LOADS SECURELY

With the PUL-PAC, maximum compactness can be achieved both in storage and in freight car and trailer shipments; this is an economic advantage of paramount importance.

The PUL-PAC has been tested for months in various installations and has proved highly successful in handling many kinds of packaged materials.

Full details on this remarkable new materials handling method and device may be obtained quickly by writing to the Clark Equipment Company, Tructractor Division.

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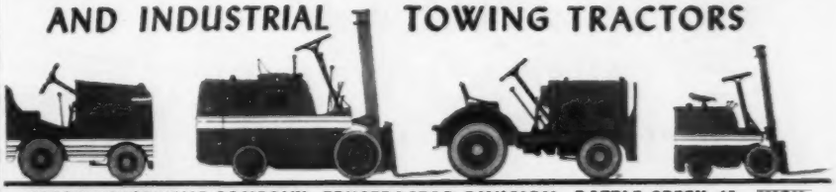

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Gives Faster, More Efficient Loom Production at Lower Cost

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Put this efficiency expert to work for you today. You will save time, money, labor. Thoroughly tested and approved by leading mills. Write, wire or phone for further details.

Exclusively by

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GREENVILLE, S. C. MAIN OFFICE

MAYWOOD, N. J. EASTERN DIVISION

MUND C. CHODD as controller. Also, ROBERT COCHRAN has been named assistant general manager; F. O. HALLMAN, manager of the cotton department; C. E. ROLLINS, superintendent of finishing; LYNWOOD WILKEY, superintendent of spinning, and WALTER W. LOGAN, assistant secretary.

LOUIS A. OBERLY has announced his resignation as research director for The Hartford Rayon Corp., Rocky Hill, Conn., and has become associated with the research staff of Industrial Rayon Corp., Cleveland, Ohio.

W. F. COVIN, former chief chemist at Southern Bleachery & Print Works, Inc., Taylors, S. C., is now associated with the bleachery division of Springs Cotton Mills, Lancaster, S. C.

WINSTON L. MAY, JR., former advertising and sales promotion manager, has been appointed to the newly created position of vice-president in charge of all merchandising and advertising activities of the Chicopee Sales Corp., New York, textile subsidiary of Johnson & Johnson.

WILLIAM H. SPENCER, JR., former superintendent of weaving in Mill No. 4, has been promoted to the superintendency of Mill No. 4 of the Dan River Mills, Inc., Danville, Va. C. C. ELLIOTT, former superintendent of maintenance, is now superintendent of Mill No. 3 of the same concern.

RAYMOND J. AUSTIN has been appointed controller of Burlington Mills Corp. of New York, and will also continue to hold his present post as assistant treasurer of the company.

WILTON TODD, former general manager of Pelzer (S. C.) Mills, has accepted the position as general manager of the Newberry (S. C.) Textile Mills. Mr. Todd will be succeeded by J. B. BAKER of the southern executive offices of Kendall Mills at Paw Creek, N. C.

R. H. HOPE, former superintendent of Jackson Mills, Iva, S. C., has been made superintendent of Chiquola Mfg. Co., Honea Path, S. C., succeeding WOODROW DUNN, who has joined Monarch Mills, Laurens, S. C. B. T. MORGAN, former assistant superintendent at Wellford Mills, succeeds Mr. Hope at Jackson Mills.

J. ALLEN AUSTIN, JR., former assistant production manager, has been named vice-president in charge

What TENNANT DRY CLEANING
can do for your MILL FLOORS
ELIMINATES SCRUBBING OF WOOD FLOORS
IMPROVES WORKING CONDITIONS
REDUCES FLOOR HAZARDS
CUTS CLEANING COSTS

When we asked many mill executives in the South and New England to list the chief benefits obtained by *dry* cleaning their floors with the Tennant System—we got the answers you see above. And the replies showed almost 100% agreement, even in different types of mills.

This careful, unbiased survey pulled no punches; we wanted *facts* and we got them. The results show what *your* mill can accomplish in restoring dark, oily floors to "like new" condition—**clean, smooth, bright, non-slippery and resistant to dirt and wear.** If you want to improve working conditions, get rid of messy scrubbing and its hazards and cut maintenance costs, too, then get the facts about Tennant dry cleaning today!

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Hard-to-get-at floor sections under machinery, etc., can be kept gleaming with Tennant 201 Oil Cover Paint. Dries over oily surfaces.

Keeps Floors Bright
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Bobbins, Spools, Rolls,
Cones, Skewers and
Shuttles

of every description

FOR TEXTILE MILLS

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Greenville, S. C.	Ralph Gossett and Wm. J. Moore
Griffin, Ga.	Belton C. Plowden
Blanco, Texas	Russell A. Singleton & Sons
Gastonia, N. C.	Gastonia Mill Supply Co.
Spartanburg, S. C.	Montgomery & Crawford

of personnel and production of Crown Hosiery Mills, Inc., High Point, N. C.

GEORGE W. SHEEK, JR., former southern division sales manager, has been named sales manager of the Indera Mills Co., Winston-Salem, N. C. He succeeds H. S. FOY, JR., recently retired.

PHILIP H. ZUIDERHOEK, former production superintendent at the B. F. Goodrich Miami plant, has been chosen factory manager of the Tuscaloosa, Ala., plant, succeeding JOSEPH C. HERBERT, who has been assigned other duties.

CHARLES H. DYSON, former vice-president, has been elected president of Textron Inc., and will supervise generally all operations throughout the Textron system.

CHARLES W. BAILEY, former assistant to the vice-president, has been placed in charge of production development and quality control of the Nashua, N. H., plant of Textron Incorporated. He succeeds JAMES W. LOGAN, resigned.

B. B. GOSSETT, former president of the American Cotton Manufacturers Association, has been elected to the board of directors of Dan River Mills, Inc., Danville, Va.

E. T. WINGET, JR., former vice-president, was recently made president of Kickernick, Inc., Minneapolis, Minn. He succeeds his mother, Mrs. Nell F. Winget, who has become chairman of the board.

JACK DAWSON TOWERY, formerly associated with Plymouth (Mass.) Cordage Company in a research engineering capacity, has been chosen to direct the activities of the pilot plant at Riegel Development Laboratories, Inc., Ware Shoals, S. C.

Aleo Mfg. Co., Rockingham, N. C., a division of M. Lowenstein & Sons, Inc., New York, has announced the following personnel changes: SAM T. SNODDY, formerly with Riegel Textile Corp., Ware Shoals, S. C., has been made general superintendent; HARRY DAVIS, formerly with Orr Cotton Mills, Anderson, S. C., is overseer of carding; O. D. PRATT has been promoted to second hand of carding; W. C. LYNCH, formerly of Exposition Mills, Atlanta, Ga., is overseer of weaving; FARIS BOWERS, promoted to second hand of weaving; STANCIL BRADY, promoted to second hand of weaving; LONNIE BRIGMAN, promoted to overseer of the cloth room, and GUY

SHEPARD
Newton's Law
Still Holds Good
Gravitation doesn't appear as a plant expense but it's a big factor in keeping costs up. Not even a feather will raise itself into working position, move sideways or deposit itself where needed. Human or steel muscles are needed to lift and move raw materials, semi-finished goods and finished products.
Where heavy loads are concerned, plant engineers don't depend on human muscles, but think in terms of a Shepard Niles overhead traveling crane. With a multitude of sizes and types available, there's bound to be one to fit your own needs — and a trained, experienced engineer of America's leading builder of overhead traveling cranes will help you select the one best fitted for your needs.
No matter what size or style Shepard Niles overhead traveling crane is selected to do your job, you can depend on sound design, rugged and precise construction, reserve capacity and economical, trouble-free operation year after year.
★ Shepard Niles engineers may feel an electric hoist is better fitted for your needs than an overhead traveling crane. Their recommendations are unbiased because Shepard Niles makes both. Only the type crane or hoist best suited for your job will be recommended.
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Static Control plus 18 Colors

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The Original Conditioner

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Inhibitor and Stabilizer
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W. M. DYNES, West Springfield, Mass.
S. T. DOUGLAS, JR., Westwood, Mass.

SOUTHERN REPRESENTATIVES
JOHN FERGUSON, LaGrange, Ga.
W. E. SMITH, Charlotte, N. C.
R. C. YOUNG, Mgr., Charlotte, N. C.

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TREXLER, JR., promoted to master mechanic.

HARRY HORROCKS, general manager of the yarn division of American Thread Co., has been elected president of the Durene Association of America. He succeeds J. BURTON FRIERSON. Other officers include: B. EVERETT JORDAN, Sellers Mfg. Co., Inc., vice-president; J. P. HOLT, Aberfoyle Mfg. Co., treasurer, and A. C. LAYTON NEWSOM who was reappointed executive secretary.

ERWIN R. LEHMANN, director of personnel of West Point Mfg. Co., Lanett, Ala., has been elected vice-president. JOE L. LANIER has been made president of the Columbus (Ga.) Mfg. Co., and WILLIAM WHORTON is vice-president and director of Dixie Cotton Mills, LaGrange, Ga. Both mills are subsidiaries of the Lanett concern.

STANLEY PHILIPS, former executive vice-president, has succeeded FREDERIC A. WILLIAMS, retired, as president of Cannon Mills, Inc., Kannapolis, N. C.

WALTER DILLARD, formerly with Pomona Manufacturing Company, Greensboro, N. C., has become associated with California Cotton Mills Company, Uniontown, Ala., succeeding FRANK S. PITTMAN. Mr. Pittman has recently accepted a position with Gurney Manufacturing Company, Prattville, Ala.

ARTHUR L. MULLEN, formerly with the Barham Mills, Brockton, Mass., has taken over superintendent duties of Albany Woolen Mills, Rensselaer, New York.

JAMES MOHAN, formerly with the Airdale Worsted Mills, Woonsocket, R. I., is now overseer of weaving at the Medway Mills, West Medway, Mass. ALBERT MUCCIARONE has been made overseer of carding at Medway Mills.

EDWARD GIARD, formerly with the United Merchants and Manufacturers plant at Louiseville, Quebec, is now superintendent of dyeing and finishing at Verney Corp., Peterboro, N. H.

PAUL A. BONSAINT, formerly with the Tilton Mill, Laconia, N. H., and Amoskeag Mills, Manchester, N. H., has been given superintendent duties of Webster Textile Mills, Laconia, N. H.

RAY L. SMALL, former superintendent of the Rochester, N. H., plant of Wyandotte Worsted Co., has been

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Among the nation's largest manufacturers of dressings for all warp yarns

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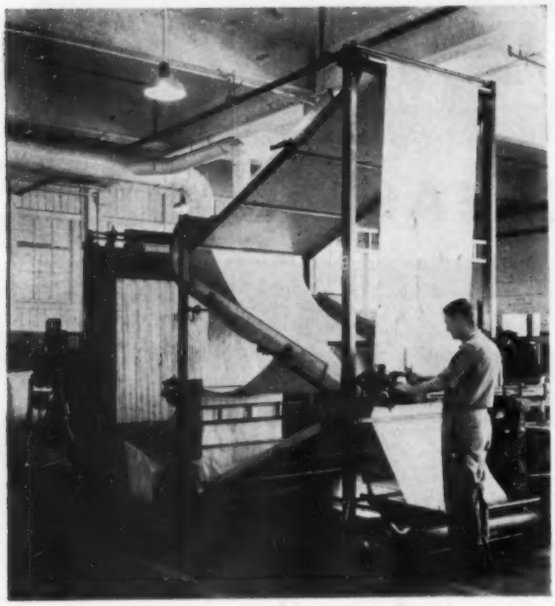

LOOK TO YOUR CLOTHROOM FOR A PROFIT

Pretend for a moment that your clothroom is a service concern, completely divorced from your production departments—somewhat like a commission dyer.

You will then see that it is entitled to the best and most modern equipment you can give it. In that case you, as the owner of this independent concern, would organize it to produce at the lowest possible cost per yard of goods handled—at a profit.

HERMAS CLOTHROOM MACHINES enable your clothroom to do better work for less money.

Why not let us tell you in detail how to get this profit by efficient clothroom machines?

Hermas shears, examining machines, sewing and rolling machines, scrays, and other equipment are made for fast, synchronized operation. Many special purpose machines are also available here.

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Interchangeable Eyes Give You

Woolen and worsted mills which have gone into fine goods or blends, and cotton mills using rayon mixes, today appreciate more than ever the two-in-one feature of Watson-Williams quality shuttles. In a matter of seconds, you can remove a regular eye and substitute the leader among all tension eyes. For almost a quarter-century, Watson-Williams tension eyes have remained unsurpassed for improved fabrics, less seconds, fewer tight and loose picks, and filling kept at even tension. Join those mills which rely on Watson-Williams shuttles and shuttle eyes for better weaving.

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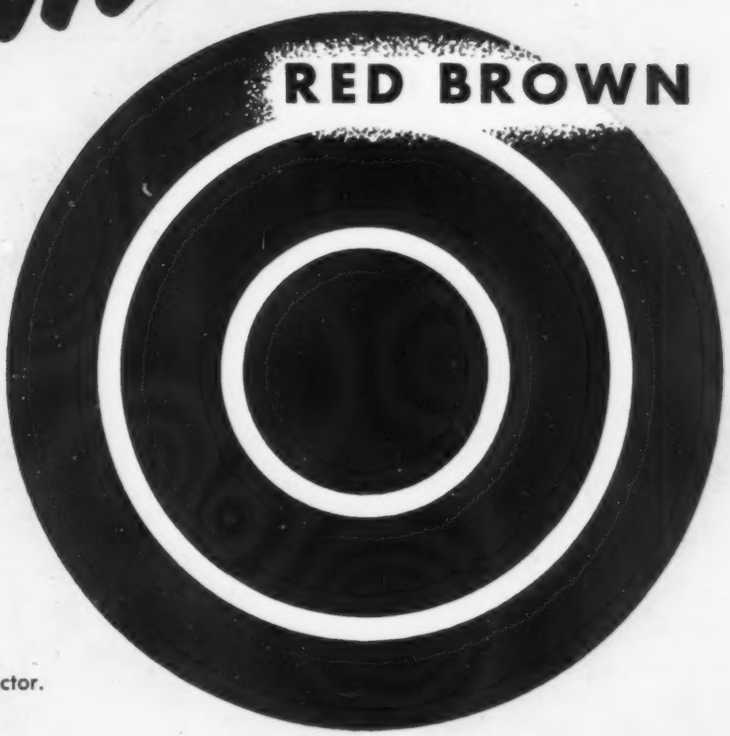
provide the answer to the demand for
better color fastness in textiles

Amanthrene

RED BROWN



in double paste or
double powder form

An excellent base color for deep chocolate browns and a shading element for taupes and tans where fastness to light, washing, chlorine and perspiration is a factor.

Satisfactorily meets the requirements for slip cover materials, upholstery fabrics, sports wear, and men's work clothes.

Suitable for cotton and rayon yarn in warp, beam and package dyeing equipment, as well as for skein work and hosiery. Well adapted, also, to jig and pad-jig dyeing of piece goods.

Another of the Amanthrene range of superior vat colors. For detailed information on the whole range available, as well as data regarding your own particular requirements, consult our nearest branch. A.A.P. technicians are always happy to be of service.

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When you buy —

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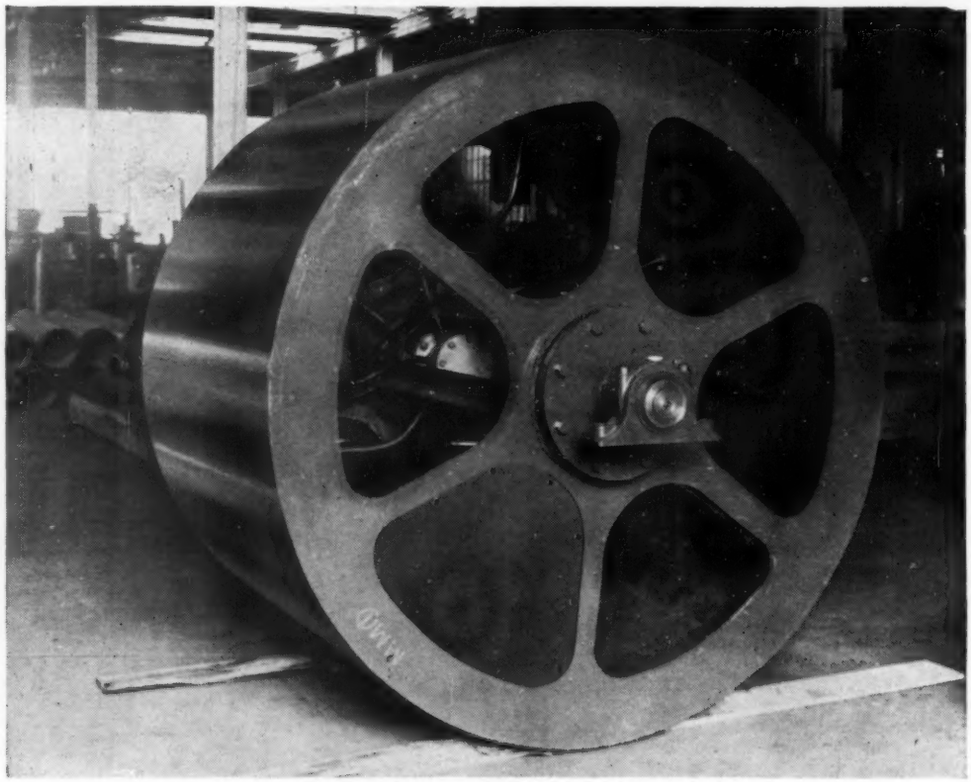
of any type, you are investing in high priced equipment from which you expect a definite return for many years. In order to realize your expectations, buy stainless steel quality.



A seven foot diameter Stainless Steel jacketed Back Dryer cylinder with end covers removed to show internal steam and syphon piping.

UNISTEL Dryers are individually engineered, taking advantage of the most modern technical progress. UNISTEL Dryers are constructed in a shop that was built for and has always specialized in stainless steel fabrication.

Engineers—Designers—and Builders of Back Dryers, Can Dryers, Slashers, Kettles, etc.

A New machine for continuous dyeing, slashing, beaming of cotton yarns

UNITED STEEL of AMERICA, INC. 30 ROCKEFELLER PLAZA NEW YORK 20, N. Y.

Canadian Representatives: United Steel Corporation Ltd. of Canada, Toronto

transferred to the Pittsfield, Mass., plant in a similar capacity.

HAROLD S. BARNEY, formerly with Berkshire Fine Spinning Associates in Fall River, Mass., International Braid of Providence, and Exeter Manufacturing Co. of Exeter, N. H., is now located at Amoskeag-Lawrence Yarns, Inc., Manchester, N. H., as superintendent.

HERMAN L. WEISLER has been appointed general manager of the knitted fabrics division of the Barbet Mills, Inc., Gastonia, N. C. He was formerly director of operations at the Hopeville, Va., plant of Celanese Corporation of America.

T. M. O'NEILL, who for 31 years was superintendent of the Monarch and Ottaray plants of Monarch Mills, Union, S. C., has retired.

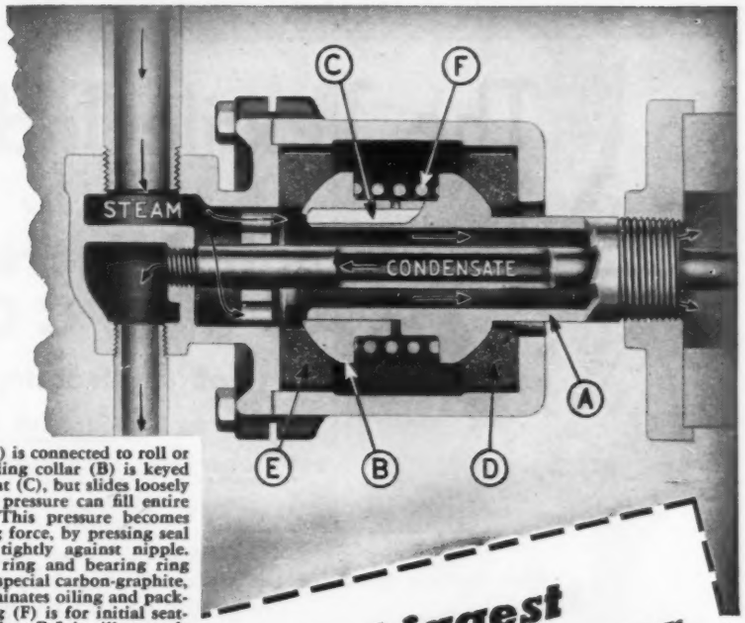
PAUL E. CROCKER, former vice-president and controller of Pepperell Mfg. Co., has been elected treasurer. He succeeds RUSSELL H. LEONARD, who remains as president and chief executive of the company. EDWARD W. MANNING has succeeded Mr. Crocker as controller. LINDSAY DEXTER, former assistant treasurer of Nashua Mfg. Co., has been made assistant to the vice-president in charge of manufacturing.

J. ROLLINS JOLLY, formerly superintendent of the Dalton, Ga., plant, was recently made general superintendent of the Dalton and Tallapoosa, Ga., plants of American Thread Co. DAN HURST has been named superintendent of the Dalton plant, succeeding Mr. Jolly.

ROBERT MYERS has been appointed superintendent and manager of White-Tex Mills, Raeford, N. C. He was at one time superintendent of Hampton Spinning Mills, Clover, S. C., and later was with Exposition Cotton Mills Co. in Atlanta, Ga.

WILLIS W. COATES, formerly with Phoenix Mills, Statesville, N. C., is now overseer of finishing and dyeing at the dye plant of American Yarn & Processing Co., Mount Holly, N. C.

GEORGE M. JOLLY, former general manager of Unique Fibers, Inc., and president of Saxon Sales Co., Inc., recently rejoined William Whitman Co., Inc. He was associated with William Whitman for nine years prior to January 1, 1946.



Nipple (A) is connected to roll or drum. Sliding collar (B) is keyed to nipple at (C), but slides loosely over it so pressure can fill entire housing. This pressure becomes the sealing force, by pressing seal ring (D) tightly against nipple. Both seal ring and bearing ring (E) are of special carbon-graphite, which eliminates oiling and packing. Spring (F) is for initial seating only. Type B Joint illustrated; other types, sizes for all needs.

...it's the biggest little trouble-saver in the mill...

In terms of physical size alone, the Johnson Joint could hardly be called big machinery. But in its ability to save time and trouble, and promote plant efficiency, its stature approaches anything the industry has ever seen.

The Johnson Joint was designed to go after the old stuffing box and steam fit troubles in a business-like way, and it literally knocks the stuffing out of them. There's no packing of any kind. There's no oiling required, ever. There's no adjusting — the higher the pressure, the tighter the seal. There's little to fear from misalignment—with provision for both lateral and angular movement built right in. Note besides how neatly it provides for more efficient syphon drainage, through the same head that admits the steam.

In dollars and cents, what does all this add up to? Well . . . enough at least to pay the cost of switching over to Johnson Joints in just a short while. Enough certainly to make the Johnson Joint too big to overlook.

Write for literature and the name of your nearby Johnson representative.

JOHNSON *Rotary Pressure* JOINTS

THE JOHNSON CORPORATION

The Textile Industry . . .

has had the

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It is now *imperative* that

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drain piping unnecessary . .

draftless uniform distribution . .

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reduces cost of . . maintenance

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Metallic Feeder Aprons
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WATSON AND DESMOND

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greenville p. o. box 779

J. J. NORTON, JR., former assistant treasurer and general manager, has been promoted to treasurer of Gaffney (S. C.) Mfg. Co. He succeeds W. A. L. SIBLEY, resigned.

Obituaries

A. C. LINEBERGER, SR., 90, president of Chronicle Mills, Belmont, N. C., passed away last December 29.

JOHN HENRY MAYES, 82, at one time president of Cramerton Mills, also Ranlo and Priscilla Mills in Gastonia, N. C., died at his home in Charlotte, N. C., December 17.

SIDNEY BLUMENTHAL, chairman of the board of Sidney Blumenthal and Co., Inc., passed away January 5 at his New York home. He was in his 85th year.

BRICE S. HULL, Pittsburgh branch manager of Solvay Sales Division, Allied Chemical & Dye Corp., died suddenly of a heart attack on January 2.

HARRAL O. PIERCE, manager of the Charlotte, N. C., branch office of Solvay Sales Division, Allied Chemical & Dye Corp., died December 28 following a brief illness.

CHARLES LEEDOM, 90, chairman of the board and former president of the Thomas L. Leedom Co., rug and carpet manufacturers, passed away suddenly.

WILLIAM A. MOORHEAD, vice-president and general manager of Joanna Textile Mills, Goldville, S. C., died as the result of an airplane accident January 13.

RICHARD W. ARRINGTON, president of Union Bleachery, Greenville, S. C., passed away in a Greenville hospital December 18 following a year's illness.

HILLMAN O. FALLON, 44, director of industrial relations for Goodall-Sanford, Inc., died recently in Sanford, Me.

SAMUEL J. MILLIGAN, 69, vice-president and general sales manager of Dominion Textile Co., Montreal, Canada, passed away recently.

FRED C. BRYANT, field representative for Curtis & Marble Machine Co., Worcester, Mass., and who has been in charge of the company's New York office for the past 38 years, passed away January 11.

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Comer Machinery Company can turn the trick for you—not by pulling the machinery you need out of a hat—but through a thorough knowledge of what goes on *machinery-wise* in the textile business. . . . —Comer keeps a finger on the pulse of mills having machinery to sell. Likewise, Comer knows who wants to buy.

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Have gone into southern textile mills since 1920—with complete satisfaction to the mill operators.

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CMC waste machine

★ We will gladly process samples of your waste and return it for your inspection.
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Uses no suction fan or waste pit, thus eliminating fire hazards.

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Controlled air pressure prevents blow-back.

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Takes up small floor space.

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Requires no dust pipes.

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Easily adjusted to process different length staples and synthetic waste.

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Industry Cooperation Asked for Industrial Mobilization Planning

Textile executives of the Southeast, as well as leaders in other industrial fields, attended a meeting of the Atlanta (Ga.) chapter of the Quartermaster Association recently and heard Brigadier General William H. Middleswart, director of Military Planning Division, Office of the Quartermaster General, Washington, D. C., speak on the subject "National Defense in an Atomic Age," with particular emphasis on industrial mobilization.

The purpose of this meeting was to launch a new Quartermaster Association program for promotion of Quartermaster Corps—industry cooperation.

During his talk, General Middleswart pointed out that the promotion of research and development is not only the most effective way, but is also the cheapest way to keep our advantage over other nations. The need for cooperation, advice, and assistance from members of the nation's industrial enterprises was stressed by the General.

It was explained that the object of the plan for industrial mobilization is to work with every manufacturer whose production is likely to be needed in the event of national emergency, so that each will know exactly what he is to make, how much, and at what rate of production. To accomplish this objective, the Quartermaster General has divided the United States into six industrial mobilization districts centered upon the key cities of Boston, New York, Atlanta, Philadelphia, Chicago, and Oakland, Calif.

In this connection it is understood that there is a Quartermaster Association chapter located in or close to each of these key cities. This arrangement should facilitate the execution of the Association's program for promotion of QMC-industry cooperation.

Asked to elaborate on the functions of these QM Industrial Mobilization Districts, Col. Clyde Massey, officer-in-charge of the Atlanta district, stated that the Quartermaster General has asked for the allocation of approximately

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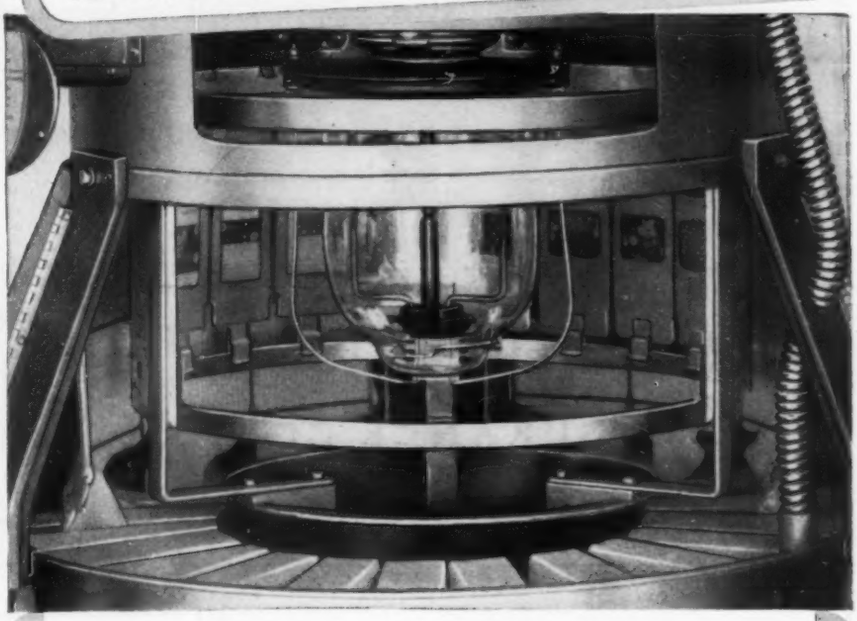
Now have an improved method of specimen suspension assuring a more equal distribution of radiant energy for all samples.

Available for installation on all Model FDA and FDA-R Fade-Ometers now in use.



A lower ring engaging the new modified specimen holders supports the specimens during exposure in such a way as to assure a more equal distribution of energy for all samples.

Developed at the request of and in cooperation with the A.A.T.C.C. Committee on Fastness to Light the new holders and lower ring prevent discrepancies in test results caused by unequal distances from the specimen to the light source resulting from improper alignment of the holders.

This new method of suspension improves accuracy of test results since it materially reduces the possibility of deviation of the specimens from the vertical due to the human element or for mechanical reasons.

The lower ring can be installed on all Model FDA and FDA-R Fade-Ometers now in operation, adapting them for use with the new type specimen holders. In addition to the holders finished in baked-on gray enamel we now are also able to supply at slight additional cost the new modified specimen holders fabricated from a dull finish stainless steel.

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on any plan of Group, Hospital, Surgical or Death Benefits for your employees, BE SURE that you have examined the Protective Plan. This Plan has many advantages for employees and their families and for the EMPLOYER. We will gladly furnish you names of many leading companies for whom we have worked out a plan to fit their particular needs.

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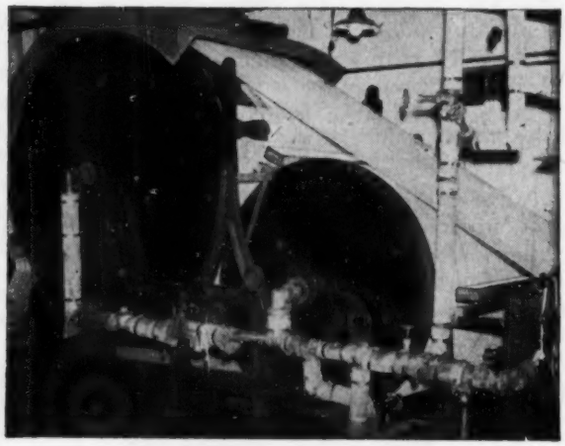

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4,000 specific concerns to be contacted for the purpose of working out with those concerns definite schedules of production on those items that could be produced in the event of an emergency. He pointed out that allocation of specific concerns to each service will prevent confusion on the part of industry, since no other service will be permitted to contact that firm. As soon as this allocation has been granted, representatives of the district offices will begin contacting industry to discuss the plan. He explained that action on the part of industry will be purely voluntary. Full cooperation is anticipated, however, since concerns contacted to date on a preliminary survey have been 100% cooperative.

Regarding procedure of operation, Col. Massey explained that as soon as authority is received to go ahead with the survey, representatives of each district will contact the concerns within that district to determine their reaction to the plan. If they are willing to cooperate, then in the case of textile manufacturing firms, qualified textile engineers will go to the plants and, in collaboration with the plant engineers, determine exactly what can be done at that particular plant.

It was indicated that in certain instances where it is found that additional machinery will be required to convert the production to material required for mobilization, recommendations might even be made to buy this needed machinery and place it in a stockpile for use when required.

Where possible, efforts will be made to have the mills actually produce a small amount of the material that they would be expected to produce in time of emergency.

Schedules of production would be worked out and projected by months over a period of two years. The Colonel emphasized that such a schedule would not constitute a contractural agreement between the government and the mill. The schedules will be used in determining whether or not sufficient facilities exist for the production of the required quantity of the particular item.

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NEW PUBLICATIONS OF TEXTILE INTEREST

Borne-Scrymser Company, 632 S. Front St., Elizabeth, N. J. Bulletin which discusses the Breton Minerol Process for oil spray conditioning and/or tinting textile fibers under all manufacturing procedures, with maximum safety in finishing.

American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pa. Booklet entitled "Symposium on Rubber Testing." The eight extensive technical papers and introduction comprising this symposium were presented at the 1947 Annual Meeting of A.S.T.M. ($2.00).

The American Monorail Co., Athens and Halstead Avenues, Cleveland 7, Ohio. Bulletin CB-1 on "Automatic Ceiling Cleaning."

MB Manufacturing Co., Inc., 1060 State Street, New Haven 11, Conn. Bulletin No. 405 which describes the Isomode Pad, a new resilient cushion which stops vibration and noise, absorbs impact shocks, and simplifies machine installation.

Carpet Institute, Inc., 350 Fifth Ave., New York 1, N. Y. Booklet entitled "The Carpet Industry Reports to its Retailers." The carpet industry and its retailers are moving steadily toward a 50% increase in volume. This booklet is the carpet industry's report of progress.

Link-Belt Co., 300 West Pershing Road, Chicago 9, Ill. Book No. 2175 on the Link-Belt Bulk-Flo, a combination elevator, conveyor and feeder in one compact, adaptable unit, designed for the mechanical handling of a great variety of bulk flowable granular, crushed, ground or pulverized materials of a non-abrasive, non-corrosive nature.

Gerbing Mfg. Corp., 154 E. Erie Street, Chicago, Ill. Catalog No. 647 on this company's Roto-Cone variable speed pulleys, which employ a double rack and pinion to keep movement of the two sheave faces equal and opposite at all times. A single spring provides the necessary pressure for proper belt tension.

Industrial Rayon Corp., 500 Fifth Ave., New York City. Booklet which graphically portrays the highlights of this company's continuous process and the special characteristics of continuous process yarns. It is entitled "Rayon Mile By Mile . . .Perfect Inch by Inch!"

Sherman W. Frazier, 953 Fifteenth St., S. E., Washington 3, D. C. Pamphlet on the Schiefer abrasion testing machine which produces uniform abrasion over a plane area of a specimen from every azimuthal direction.

Proctor & Gamble, P. O. Box 599, Cincinnati 1, Ohio. Booklet on Proxol, their new wool oil, in which is described the characteristics of this new product, how it is packed, and where it may be ordered.

Leslie Co., 185 Delafield Ave., Lyndhurst, N. J. Illustrated folder entitled "Controlled Heat" describing the company's new line of Class "T" self-contained, self-acting, temperature regulators.

Associated Factory Mutual Fire Insurance Companies, 184 High St., Boston 10, Mass. Booklet entitled "Watchman—What Would You Do?," outlining the correct procedure in handling fires.

U. S. Hoffman Machinery Corp., 105 Fourth Ave., New York 3, N. Y. Booklet A-650 which describes the applications of Hoffman blowers and exhausters on production operations which require air pressure from one to eight pounds per square inch or vacuum from two to 11½ inches of mercury.

Chapman Electric Neutralizer Co., Portland 6, Maine. Bulletin No. 69 on this company's static neutralizer for the woolen card room.

The International Wool Secretariat, 201 East 57th, New York 22, N. Y. The IWS Photo Release No. 1, containing a selection of pictures that tell the story of wool from fiber to fabric.

The Fuller Brush Co., Fuller Park, Hartford, Conn. Catalog folder, "Fuller Paint Brushes," picturing each type in the Fuller paint brush line and giving specifications for each.

Fischer & Porter Co., Hatboro, Pa. Catalog Section 88-D on this company's Viscorator continuous viscosimeter for viscosity measurement and automatic viscosity control from .0008 to 800,000 centipoises.

Baird Associates, Inc., 33 University Road, Cambridge 38, Mass. Bulletin XXX entitled "Infrared Recording Spectrophotometer" and Bulletin No. XXIV on the forced draft dryer.

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Olate's extremely low titer assures fluid solutions which penetrate fibers quickly and evenly . . . eliminate dry spots . . . guard against uneven fulling and non-uniform felting.

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Fluid Olate solutions soften the fabric quickly, too. No uneven lubrication to cause uneven shrinkage and poor coverage when Olate is on the job.

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Dirt and oil are loosened quickly and emulsified thoroughly when Olate goes to work. Dirt is held in suspension until it is ready to be flushed away during the scouring operation.

Olate can save you time, steam, and manpower in your fulling and scouring operations. Olate-processed woolens *look* better . . . *feel* better. Prove it with a month's trial.

Olate

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safe and efficient for every textile soap usage

Inflationary Taxes

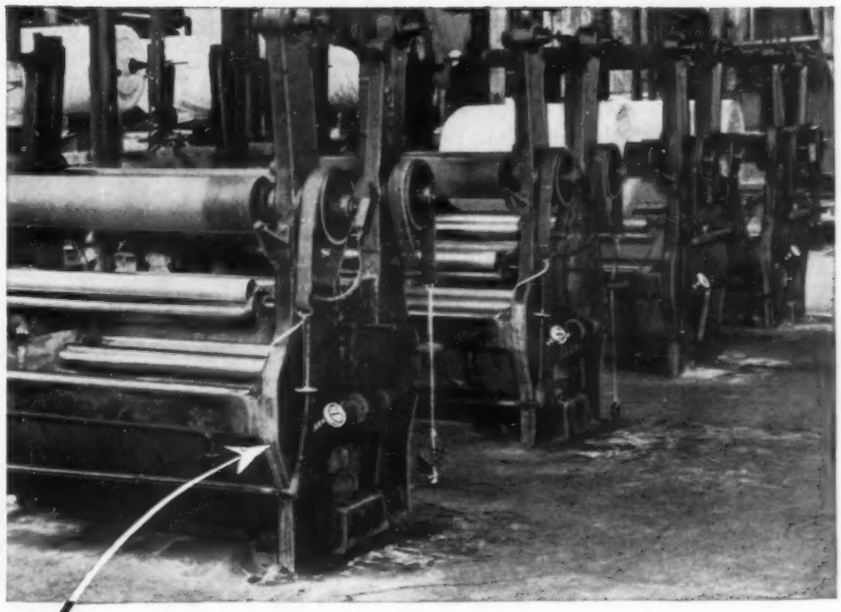
(*Continued from page* 86)

recently been proposed by the President. The proposal that every taxpayer be given a blanket income tax rebate of $40.00 for himself and each dependent, and that the corporation tax be increased to offset this benefice, is a very inflationary proposition. It proposes to give three billion dollars to about ten million people for spending purposes, to buy things which will cost three billion dollars more on account of the manufacturers and distributors of the goods passing the tax along, as usual, to the consumer, who will at once cry out for higher wages.

It seems quite impossible for our legislators to grasp the idea that is is impossible to tax a corporation. A corporation is merely a commercial device by means of which individuals carry on business. The corporation's taxes are a cost of doing business just the same as coal, electricity, cotton, or insurance, and the prices of the goods manufactured or distributed by the corporation are merely raised to include the taxes.

Only individuals can be taxed, and it is very difficult, if not impossible, to tax individuals except in their capacities as consumers. An individual who makes money in the conduct of a business and who is heavily taxed is going to add most or all of his taxes to the cost of doing business, just the same as a corporation would. It is his role as consumer that practically everyone pays taxes, whether he be laborer or millionaire. Taxes are finally wrapped up in the cost of everything everybody buys, and any corporation or any individual engaged in business is going to shoulder most of the taxes off onto the purchaser of his product.

If it were possible to reduce the taxes of ten million people by three billion dollars without trying to make up the taxes somewhere else, that would of course be the same thing as giving the ten million persons a wage increase amounting to three billion dollars, and might perhaps stifle the demands of the labor unions



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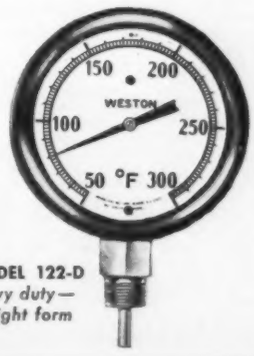

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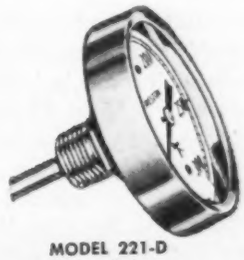

MODEL 221-D
3" head dia.

for wage increases which can do nothing but raise prices. If the ten million persons are, however, granted a tax reduction or income increase of three billion dollars, and at the same time corporation taxes are increased by the same amount and prices likewise increased, the taxpayer will find that his $40.00 saving is purely imaginary, and he is going to clamor as loudly as ever for increased wages to offset higher prices.

This seems to us like a very inflationary tax proposal, because it is certain to force prices up at a time when prices surely need to go down. High corporation taxes are inflationary in more ways than one, as was very acutely demonstrated during the war when the high excess profits taxes led many corporations to fantastic extravagances, simply because the cost of the foolishness was paid for by the government.

A corporation paying an exorbitant tax has less and less incentive to thrift as the tax rate goes up. A corporation executive is much more likely to embark on some risky expenditure if he feels that any loss is going to be largely paid for by the government.

The same situation exists with respect to the frightful taxes levied against individuals of means. A man with an income of a hundred thousand dollars a year can rightly feel that any wasteful foolishness that strikes his fancy can be undertaken at government expense if it is something that can be charged off as a business cost. There is no telling how many millions, or perhaps billions, of dollars are spent every year in wasteful extravagances by salesmen and corporation officers because the government is going to pay most of it.

There is absolutely no incentive to business thrift in the case of an individual whose income is being taxed at the rate of 75 or 80 per cent of what he makes. These fantastic tax rates merely encourage people of means to squander money fruitlessly so long as the squandering can be charged against taxation. We were reading not long ago about some tycoon

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who maintained a palatial estate at tremendous expense because the Treasury Department permitted him to consider this as a business investment for the entertainment of customers.

We believe that any reasonable person will admit that individual income tax rates in the upper brackets are too high. Regardless of what the Congress or the Supreme Court may say about it, income taxes ranging to 75 and 80 per cent, and in some cases even to 90 per cent, are confiscatory as fas as the man who earns the money is concerned, and these rates encourage big earners to spend lavishly where there is a good pretext for considering the expenditure as a tax deduction item. Thus is thrift discouraged and waste abetted.

Furthermore, these fantastic tax rates as applied to persons with high earning power divert money from investments in capital goods to expenditures for consumer goods. A man who is capable of earning two hundred thousand dollars a year and who would like to return most of his earnings to his business or to invest them in some other business, is stripped of this money by the government, which is thereby enabled to levy lighter taxes on the man who is causing the inflationary pressure on consumer goods.

The direct way to ease this inflationary pressure is *higher* taxes on the man who is spending the money that creates the pressure, but you will not find many people in Congress who are willing even to discuss this salutary remedy. In Congress there is an insistent desire to give more money to those who are pushing up prices so that they can push them higher. Money left in the hands of those who created it, and invested in better equipment for producing more wealth, would ease the inflationary pressure on our economy; yet every suggestion that the creator of wealth be allowed to keep more of it has been met with hoots of derision by our New Deal-minded politicians, who cling to the socialist dogma that the able should support the incompetent and the productive should main-

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MAPROFIX PASTE
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Maprofix Paste is not just a substitute for soap or an additive for soap solutions in wool scouring. It is one of the most potent of all scouring materials, giving definitely superior results on raw wool, wool skeins, wool and worsted piece goods, etc.

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- **Costs materially less to use than high quality soaps.**

Maprofix Paste is a sodium salt of a sulfated fatty alcohol mixture, compatible with hard water, acids and alkalies, and completely stable to heat, as well as in storage.

It is also used for scouring tubular knit goods, acetate and rayon yarns and piece goods, rayon hosiery, print washing and many other emulsifying, detergent and wetting out processes.

If you have never tried Maprofix Paste for wool scouring, write for a big enough sample to check the claims we make above!

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And, do not hesitate to get your elevator work done now. Our prices have gone up less than have many other construction costs.

Call on Monarch, the South's own elevator manufacturer. We are located nearby to give you faster service.

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Greensboro, N.C. *Department A*

The Largest Firm in the Southeast
Devoted Exclusively to Elevator Manufacturing

tain the shiftless.

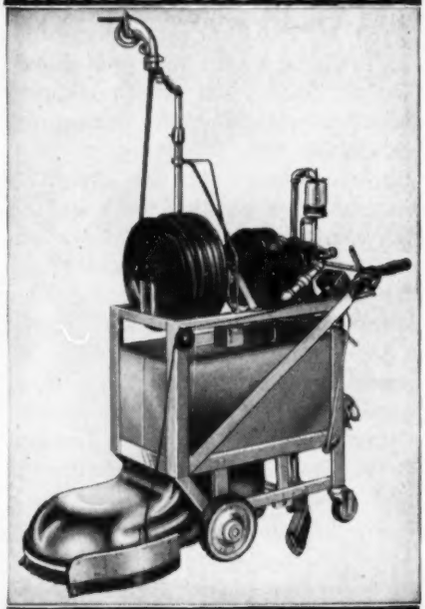
Practically every big business in the United States was originally a little business which grew by plowing back its profits. The present tax policies of this country are aimed at stopping all that, by making it practically impossible for little businesses to grow. The big corporation which has tremendous credit and can borrow money on favorable terms or finance itself through stock issues to the general public, is being put more firmly in the economic saddle every day by the tax policies which have been developed during the New Deal Era. The big fellow can get money when he needs it and the little fellow can't, and the government will not let him keep the money he makes to put back in his business. The capital produced by the ability and energy of a highly productive individual is swept into the national kitty to be doled out by politicians.

The high individual income tax rates are responsible for billions of dollars each year being paid out in salaries to corporation executives. If a corporation wishes to pay its president a decent salary of, say, $25,000 net, a year, it has to actually give him about $55,000 of salary, without taking state income taxes into consideration. If they wish to give this man a $10,000 raise, they must actually give him about $45,000 more money. The next $10,000 of real income would require a salary of around $160,000 a year, and if they wanted to give him a net income of $75,000 a year, they might as well give him the corporation.

A salary of $200,000 a year will leave the recipient a net income of about $50,000, while $150,000 goes for taxes, and this does not include his state income taxes or any of the other numerous taxes this man must pay for owning property and spending his net income for buying things, the prices of which have been jacked up by taxation. The $200,000 salary, however, is a part of the corporation expense of doing business, and goes right into the price of its goods or services.

Who says income taxes are not inflationary?

CLEAN FLOORS in 1/2 the Time with 1/2 the Labor



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- Scrubs Floors Evenly
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One operator works the easy controls. Clean water is fed from one tank upon the soaped floor which is then scrubbed with a 19" diameter revolving brush. Behind it a rubber squeegee mops up the dirty water which is vacuum pumped into a second tank.

The Lawlor 20-D is just the machine for large floor areas. Only 22" wide, it can be used in congested places, around machines, counters and desks. Available for either AC or DC current.

Write for new catalog giving description of the Lawlor 20-D and complete line.

MOP WRINGERS

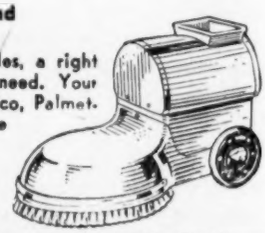
All steel with perforated rolls. Easy foot-lever operation. Made for one or two pails.

MOPPING TANKS

Heavy galvanized steel with welded seams. Two compartments, each with shut-off. Foot pressure wringers. 30 or 60-gallon capacity.

SCRUBBERS and POLISHERS

12 different styles, a right size for every need. Your choice of Tampico, Palmetto or Steel Wire brushes.



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SUPPLIERS' NEWS

WHAT THEY ARE DOING

J. D. Goods & Gordon, Inc., management consultants, have opened their southern headquarters in Greensboro, N. C. E. G. Michaels, II, formerly associated with Fieldcrest Mills, Spray, N. C., has been appointed general manager, and J. Henderson, of Toronto, Canada, is field supervisor.

The Interchemical Corp., Textile Colors Division, Fair Lawn, N. J., has announced the appointment of Fred Baumann, formerly in dyestuff sales,

Mr. Baumann **Mr. Zelek**

as sales manager. John Zelek, former head of dyestuff research and development, has been made plant manager of the dyestuff department.

It has been announced that Howard A. Marple, former manager of trade advertising, has been appointed director of the newly-created advertising department of Monsanto Chemical Company, St. Louis, Mo. R. Allan Gardner, of St. Louis, has been made assistant director.

The following personnel changes have been made in the Electrochemicals Department of the Du Pont Company in Wilmington, Del. Donald O. Notman, former director of the technical division, has become assistant general manager. He succeeds Samuel G. Baker who was made general manager upon the retirement of F. S. MacGregor.

Draper Corporation, Hopedale, Mass., has awarded 186 veteran employees the 40-year or more emblem of service. The years of service total 8630.

Fred M. Allen, Jr., former manag-

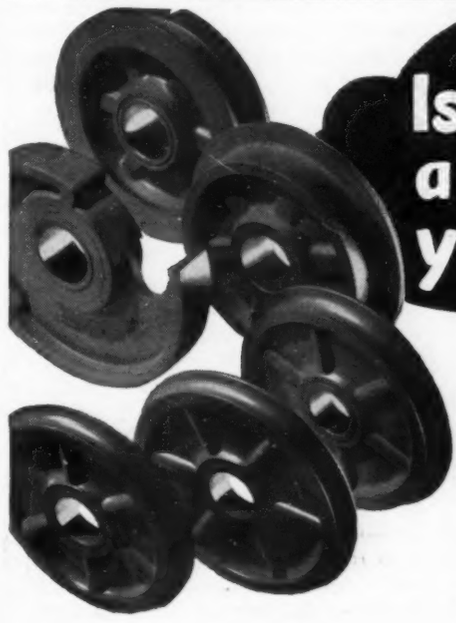
HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

TEXTILE SHIELD CO., INC.

Metal Protection for Wood Turnings

J. N. ANDERSON, *Treas.*
LAWRENCE, MASS., U.S.A.



Is Down Time a pain in your neck?

Thousands of RunRite Plastic Sheaves have been running continuously, in many plants, for over six years, and still going perfectly. Under similar conditions they should do equally as well for you. Figure your savings in reduced down time alone. Then, bear in mind, that RunRites' smooth, perfectly balanced strap surface means longer life to harness straps. Once installed, they need no further attention for years of dependable service.

RUNRITE TRADE MARK Plastic Sheaves
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REPRESENTATIVES

EMMONS LOOM HARNESS CO., Lawrence, Mass.
WATSON & DESMOND CO., Charlotte, N. C.
HENRY H. HERSEY, Greenville, S. C.
HARRIS MANUFACTURING CO., Atlanta, Ga.

Smilin' Tex says:

"IT AIN'T BRAGGIN' IF YOU CAN PROVE IT"

It's true: In Texas roses bloom in January.

The equable climate on the Texas Gulf Coast is fine for work and fine for play. And the mild winters can be translated into dollars and cents. It costs less to heat homes and factories, the friendly outdoors puts a bloom in children's cheeks, contentment in the minds of the worker.

A hospitable climate is but one reason why you should build your textile plant on the Texas Gulf Coast. Here are other "brags" that stand up:

- Texas Cotton: 28% of U. S. yield
- Texas Wool: 21% of U. S. yield
- Texas Mohair: 84% of U. S. yield
- Natural Gas: 58% of proved natural gas reserve.
- Texas Synthetics: a rapidly expanding production.
- *Plus:* Rail, water, highway and air transportation to all markets, domestic and foreign; intelligent, cooperative labor; an abundance of pure water; a community property law but no state income tax, no sales tax.

Send for a Survey. On request, we will prepare for your company a carefully engineered and confidential survey of the Texas Coast Country individualized to fit your particular problem. No cost, no obligation. Address Research Department, Houston Pipe Line Company, Houston, Texas.

HOUSTON PIPE LINE CO.

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GEO. A. HILL, JR., President

Wholesalers of **Natural GAS**

ing editor of Southern Textile News, Charlotte, N. C., has joined the public relations department of the National Cotton Council.

The Foxboro (Mass.) Company has officially moved into its new building in Montreal, Canada, which is said to be the largest plant in Canada devoted to the manufacture and sale of industrial instruments.

J. Cantey Alexander, formerly associated with Corn Products Sales Co. in charge of sales in the South, is

Mr. Alexander

now representing Frank G. North, Inc., and Pioneer Heddle and Reed Co. in the southeast.

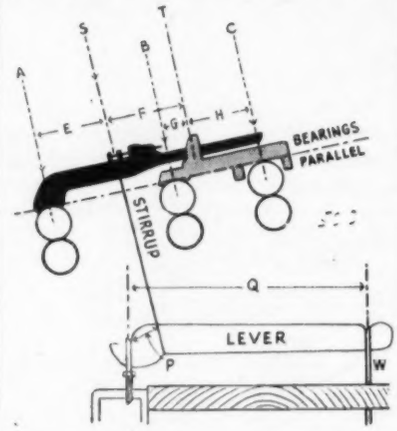
A textile consulting firm in New York has been formed by Stanley A. Sokoloff, formerly associated with the St. George Textile Corp., Max Sokoloff & Co., and who is now on the staff of the School of Retailing, New York University.

Walton Laboratories, Irvington, N. J., have appointed Watson & Desmond, Charlotte, N. C., as their sales representative on humidifiers. It is also announced that Richard V. McPhail, Gastonia, N. C., has joined Watson & Desmond, and will supplement the sales organization in North and South Carolina.

The American Cyanamid Company, Bound Brook, N. J., has appointed Ralph M. Fischer as manager of technical service. He has, since 1943, specialized in resins for textile finishes from the technical sales standpoint. In his new position, Mr. Fischer will supervise all field demonstrations in the New York, Philadelphia, and Chicago territories.

Steps have been taken in the sales expansion program of William Whitman Company, New York, to include: the opening of a Chicago office to enable the company to distribute directly to customers in midwestern states; the establishment of a noils and waste department in Boston, Mass., and the appointment of the

How to Check Weights on your Spinning Rolls



A, B and C } Pressures on Front, Middle and Back Rolls as shown above

E, F, G, and H } Distances shown measured in inches.

P — The perpendicular distance from stirrup to contact point at top of lever screw. When measuring, be sure rule is held so angle with stirrup is 90°

Q — The distance from contact point at top of lever screw to weight hook

T — The point of contact between saddles, as well as the pressure on the Back Saddle

S — The point of contact between stirrup and Front Saddle, as well as the pressure on the Front Saddle.

W — The weight on the lever in pounds.

Formulae for Figuring Weight on Rolls:

For Pressure on Front Saddle:	(W)(Q) = S(P)	Solve for S
For Pressure on Front Roll:	(S)(F) = A(E+F)	Solve for A
For Pressure on Back Saddle:	(S)(E) = T(E+F)	Solve for T
For Pressure on Middle Roll:	(T)(H) = B(G+H)	Solve for B
For Pressure on Back Roll:	(T)(G) = C(G+H)	Solve for C

DIXON suggests a careful Check of Weighing on all Rolls

The above weight ratio formulae are designed to help you to a more complete and visual understanding of the many factors affecting good weighting and the proper functions of an ideal saddle assembly. Knowledge of the hows of correct weighting and the application of this knowledge in practice may prevent many a drafting headache.

Cut out this diagram and formulae and keep for your future reference or we will send you reprints on request. If you encounter weighting problems which these formulae do not solve, send them to us for solution.

DIXON LUBRICATING SADDLE CO.

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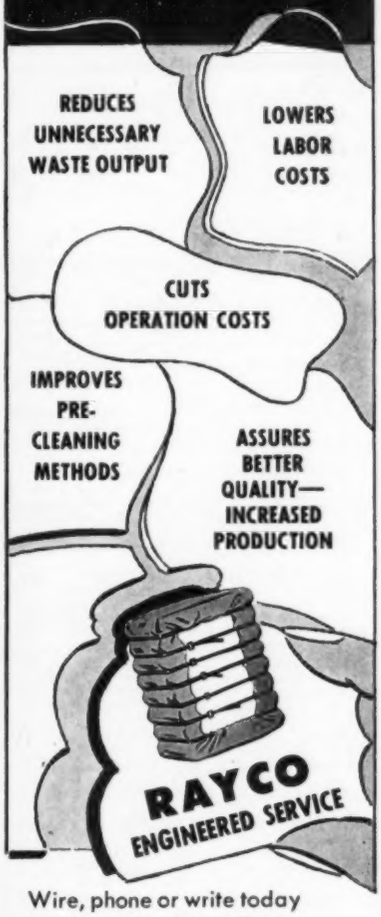
LUBRICATING SADDLES

RAYCO
Engineered Service Solves Your Waste Problems



Wire, phone or write today and arrange for a Rayco Waste Survey in your mill. Our fiber specialists are always at your service.

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RAYCO *for* **COTTON AND SYNTHETIC FIBERS**

Holyoke Worsted Company as sole selling agent for the company.

Carl W. Harris, formerly associated with Allis-Chalmers Mfg. Co. and the Halifax Machine Co., has been

Mr. Harris

appointed New England sales representative by the Eriez Mfg. Co., Erie, Pa.

Three sales personnel changes in the Special Chemicals Division of the Pennsylvania Salt Mfg. Co. have been announced. They include the appointment of Albert H. Clem to a newly-created position of field sales supervisor. Mr. Clem, former product supervisor on cleaners, pickling and descaling products, is succeeded by Philip C. Staples, Jr. Succeeding Mr. Staples as product supervisor on corrosion-resistant products is Robert R. Pierce, who joined Pennsalt in 1941.

Paul D. Jacobs, formerly associated with the textile research laboratories of the American Cyanamid Co., Stamford, Conn., has joined the textile research and development staff of the Onyx Oil & Chemical Co.

Charles R. Harris, former executive vice-president and general manager, has been elected president of the Pneumafil Corporation. The company has also announced the appointment of M. O. Thompson, who has handled the New England business of Eriez Mfg. Co. and The Marquette Metal Products Co., as regional manager. He will be responsible for the corporation's activities in New England and the states of New York, New Jersey and Pennsylvania, making his headquarters in the new offices in Boston, Mass.

The American Viscose Corp. has begun work on an expansion in the power plant at the rayon mill in Lewistown, Pa., and has installed a generating unit, boilers and auxiliary equipment to increase the present output by approximately 40 per cent.

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in Welding Fittings

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This service is restricted to those engaged in operation and management of textile industries

GENERAL ECONOMIC, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

5. FACTORING AND FINANCING — Illustrated booklet on how factoring works, cost and credit information.—TEXTILE BANKING COMPANY, New York, N. Y.

6. SERVING THE TEXTILE INDUSTRY—Illustrated booklet on services of textile and industrial consultants in assisting mill management.—WERNER TEXTILE CONSULTANTS, INC., New York 17, N. Y.

7. RAYON TELLS ITS STORY TO THE PUBLIC—Folder containing reprints of advertisements explaining some of the many roles in which rayon is serving the American public.—AMERICAN VISCOSE CORPORATION, New York 1, N. Y.

8. WHAT DOES A FACTOR DO — Illustrated booklet with case histories.—MEINHARD GREEF & CO., INC., New York 10, N. Y.

9. TESTING IN MODERN INDUSTRY—This booklet includes many useful tables, conversion factors, equivalent yarn sizes and other information helpful in textile mills. Also describes specialized testing service. Available free to mill men on request.—UNITED STATES TESTING CO., Hoboken, New Jersey.

10. "LABOR AND MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES" — 8-page illustrated folder outlining principles of industrial engineering as they apply to textiles.—AMERICAN ASSOCIATED CONSULTANTS, INC., New York, N. Y.

11. FLETCHER JUNIOR "SUPER-SELF-BALANCING" EXTRACTOR—Illustrated folder describing this new extractor with the highly efficient self-balancing arrangement which uses steel springs instead of rubber buffers.—FLETCHER WORKS, INC., Philadelphia, Pa.

PLANT AND PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

107. FINNELL SCRUBBERS — Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

108. RIHCO TYPE B HUMIDIFIER HEADS—Bulletin describes new atomizers with construction lessening air consumption. — ALDRICH MACHINE WORKS, Greenwood, S. C.

115. ATOMIZER HUMIDIFIERS—Recent issue of "Parks' Parables" on Turbomatic self-cleaning humidifiers, and automatic regulation. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

129. BAHNSON CENTRIFUGAL HUMIDIFIER—Bulletin 327 describes this completely self-contained industrial humidifier which requires only water feed and drain and electrical connection to install.—THE BAHNSON COMPANY, Winston-Salem, N. C.

132. ROOF, WALL AND FLOOR INSULATION—Illustrated booklets on uses of PC Foamglas Insulation and describing its waterproof, fireproof and permanent insulating properties. — PITTSBURGH CORNING CORP., Pittsburgh 22, Pa.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

138. MAGNESIUM IN THE TEXTILE INDUSTRY—Illustrated booklet on properties of magnesium for spinning, twisting, winding, knitting machines, looms, beams, spools, bobbins.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

151. INDUSTRIAL RBUSHES—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS' SONS, INC., Cedar Grove, N. J.

152. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—40-page illustrated book covering air conditioning from humidity control to complete refrigerated conditioning with installations, charts, covering ABC's of cooling textile mills.—CARRIER CORP., Syracuse, N. Y.

155. GLASS BLOCKS—28-p. booklet with illustrations, engineering data, patterns PC glass blocks. —PITTSBURGH CORNING CORP., Pittsburgh 22, Pennsylvania.

159. BAHNSON HUMIDUCT SYSTEM — Bulletin 330 describes this unit system of air conditioning for humidifying, cooling, heating, ventilating, filtering, and dehumidifying in any desired combination. —THE BAHNSON CO., Wnston-Salem, N. C.

160. INSTALLING MACHINERY WITHOUT LAG SCREWS OR BOLTS — Booklet describing use of UNISORB pads for anchoring all types of machinery. —THE FELTERS COMPANY, Boston, Mass.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs, as well as preserving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

163. LAWLOR FLOOR MACHINES — Illustrated pamphlet containing specifications and describing All-Purpose Floor Machines.—THE SELIG COMPANY, Atlanta, Ga.

165. SELF-LOCKING NUTS — Illustrated folder lists complete dimensions of standard hex nuts available in sizes from No. 4 machine screw to 1¼" S.A.E. and U.S.S. and describes the outstanding features of ESNA Elastic Stop Nuts.—ELASTIC STOP NUT CORP. OF AMERICA, Union, New Jersey.

166. OAKITE PLANT MAINTENANCE DIGEST—A 16-page manual describing materials and methods for handling 54 recurring maintenance cleaning and related tasks in factories and mills.—OAKITE PRODUCTS, INC., New York 6, N. Y.

167. DU PONT COLOR CONDITIONING FOR INDUSTRY—Booklet, color used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale. — E. I. DU PONT DE NEMOURS & CO. (Inc.), FINISHES DIVISION, Wilmington, Delaware.

168. DIAMOND VULCANIZED FIBRE HOLLOW WARE—Catalog HW-11 describing and illustrating boxes, trucks, cans, barrels, baskets, and trays made of Diamond Fibre for use in textile mills.—CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

170. WHY IT PAYS TO ANCHOR YOUR MACHINE WITH UNISORB—Illustrated booklet discussing control of vibration and noise and how UNISORB reduces maintenance costs.—THE FELTERS CO., Boston, Mass.

171. SULLIVAN T8-WG9—Illustrated bulletin describing the Sullivan line of heavy duty air compressors.—SULLIVAN DIVISION JOY MFG. CO., Pittsburgh, Pa.

172. VENTILATING FANS—Bulletin 3339 gives facts on Buffalo Ventilating Fans. — BUFFALO FORGE CO., Buffalo, N. Y.

173. HUMIDITY—This booklet includes data on Walton Humidifiers and discusses problems of handling new fibers and other changed conditions in mills.—WALTON LABORATORIES, INC., Irvington, 11, N. J.

176. AUTOMATIC SELF-CLEANING ATOMIZER HUMIDIFIERS—Latest bulletin describing same.—AMERICAN MOISTENING CO., Providence, R. I.

177. DUCTLESS AIR CONDITIONING — Recent bulletin describing same.—AMERICAN MOISTENING COMPANY, Providence, R. I.

178. WELDING FITTINGS & FLANGES — 240-page catalog describing the Tube Turns line of more than 4,000 items and including an engineering and technical section containing valuable data for the piping engineer.—TUBE TURNS, INC., Louisville 1, Ky.

179. TOLEDO SCALES — A condensed catalogue which illustrates and describes all of the principal types of weight control equipment used in the textile industry. — TOLEDO SCALE COMPANY, Toledo, Ohio.

180. TANK MAINTENANCE — Illustrated folder describing R. E. McLean's methods of cleaning and painting water tanks and stand pipes. — R. E. McLEAN, Gastonia, N. C.

181. AIR FILTRATION AND DUST CONTROL—24 pages on atmospheric control, including engineering data.—AMERICAN AIR FILTER CO., INC., 275 Central Avenue, Louisville 8, Ky.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

210. GOODYEAR MECHANICAL RUBBER GOODS CATALOG—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill.—GOODYEAR TIRE & RUBBER CO., Akron, Ohio.

211. JOHNSON BRONZE CATALOGUE NO. 460—Shows over 850 sizes of cast bronze bushings, 350 sizes of UNIVERSAL Bronze Bars and over 250 Electric Motor Bearings. — JOHNSON BRONZE COMPANY, New Castle, Penna.

212. GATES TEXTILE ACCESSORIES — Showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions.—THE GATES RUBBER COMPANY, Denver, Colo.

216. LEATHER BOOKLET NO. 202 — Attractive booklet illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

218. BALL BEARINGS ON TEXTILE MACHINERY—Catalog 9 gives advantages of ball bearings, describes types, illustrates each type of textile machinery.—THE FAFNIR BEARING CO., New Britain, Connecticut.

225. BRONZE BEARINGS — 64 page catalog of standard sizes of textile and industrial bearings, graphited oil-less bearings, bronze bars, babbitt metals.—THE BUNTING BRASS AND BRONZE CO., Toledo, Ohio.

231. V-BELT ENGINEERING DATA BOOK—Over 50 pages of pertinent engineering information including data on selecting a V-belt drive design of special V-belt drives, numerous standard tables, charts and belt and sheaves list prices. — MANHATTAN RUBBER MANUFACTURING DIV. of Raybestos-Manhattan, Inc., Passaic, N. J.

235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pennsylvania.

236. LEATHER BELTING CALCULATOR—Handy and attractive calculator for determining belt, speeds, horsepower per inch of belt widths, etc., will be sent free on request.—J. E. RHOADS & SONS, Philadelphia, Pa.

237. FAFNIR BALL BEARINGS FOR THE TEXTILE INDUSTRY—Outlining the application and advantages of ball bearings on textile machinery.—FAFNIR BEARING CO., New Britain, Conn.

244. TEXACO SPINDURA OILS—Folder on lubrication for all types of spindles, based on actual tests.—TEXAS CO., New York City.

246. CUTTING OPERATING COSTS—Nationwide Illustrated Survey showing how American textile mills cut operating costs with Multiple V-Belt Drives.—GATES RUBBER CO., Denver, Colorado.

263. NEEDLE ROLLER BEARINGS—Catalog Engineering and Application Data Edition 32 contains full data on selection of proper Needle Roller Bearings and outlines uses of such in various commodities including textile uses, types, installations, lubrication, etc. — TORRINGTON COMPANY, Torrington, Conn.

264. NEW DEPARTURE SHOP MANUAL—Illustrated catalog showing ball bearing mounting and maintenance practice. Covers storage, cleaning, lubrication, types of bearings.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

265. INTERCHANGEABLE BALL BEARING FOR REPLACEMENT—Charts showing numbers used by manufacturers to identify bearing characteristics, also information on specifications.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

269. LUBRICATION AND MAINTENANCE OF BALL AND ROLLER BEARINGS—Illustrated bulletin describing efficiencies and economies of NON-FLUID OIL for all types ball and roller bearings.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

270. MANHATTAN FLEXLASTICS — Illustrated booklet describing how flexlastics are used in the Manhattan and Condor line of belting and mechanical rubber goods.—MANHATTAN RUBBER DIVISION, Passaic, N. J.

271. CARDING, SPINNING AND WEAVING LUBRICATION—Informative bulletins describing advantages of NON-FLUID OIL over ordinary lubricants for the lubrication of carding, spinning and weaving machinery.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

272. HOUGHTON LUBRICATION CHART — Attractive chart listing lubrication recommendations for all mill departments and various textile machines.—E. F. HOUGHTON AND CO., Philadelphia, Penna.

275. GEM OILERS—Leaflet showing construction features, capacities, etc., of flexible spout welded steel oilers.—GEM MFG. CO., Pittsburgh, Pa.

276. SPEED CONTROL—Bulletin 20B6051G describes Texrope variable speed drives. — ALLIS-CHALMERS MFG. CO., Milwaukee 2, Wis.

277. PRECISION COMPOUND AND CHAIN DRIVE—Folder explaining more porfitable operation of roving frames.—PRECISION GEAR AND MACHINE CO., Charlotte, N. C.

278. ROLLER BEARINGS—New 35-page Hyatt handbook, "Guide Lines," is a guide to the proper application of cylindrical roller bearings in machinery and equipment of all types.—HYATT BEARINGS DIV., General Motors Corp., Harrison, N. J.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices. — THE JOHNSON CORP., Three Rivers, Mich.

307. THERMOMETER AND PRESSURE GAUGES—Catalog 6705-R and 6706 give data on both circular and rectangular case pressure type thermometers for indicating, recording and controlling processing operations in textile industry.—BROWN INSTRUMENT COMPANY, Philadelphia, Pennsylvania.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips. — CRANE CO., Chicago, Ill.

314. MOISTURE CONTENT CONTROL — Bulletin F-1705-1 giving details of features and benefits of moisture equipment control for slashers and textile applications. — BARBER-COLMAN CO., Rockford, Ill.

315. CONTROL INSTRUMENTS FOR TEXTILE PROCESSES—32-page illustrated booklet describing controls for such processes as slashing, dyeing, bleaching, kier boiling, drying, air-conditioning, etc. —BROWN INSTRUMENT CO., Philadelphia, Penna.

316. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operation of hydraulic calenders, presses, hydraulic controls, etc.—H. F. PERKINS & SON, INC., Holyoke, Mass.

317. POWELL VALVES FOR CORROSION RESISTANCE—20-page booklet which briefly describes and illustrates the very complete line of Powell valves available in a large variety of metals and alloys to handle all corrosive fluids—to help solve flow control problems where corrosion may be encountered.—THE WILLIAM POWELL CO., Cincinnati 22, Ohio.

320. OAKITE POWER PLANT DIGEST—A 20-page manual describing materials and methods for handling 71 cleaning, degreasing, descaling, derusting, paintstripping and related operations encountered in power plants.—OAKITE PRODUCTS, INC., New York 6, N. Y.

321. RED RAY BURNERS—Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED RAY MFG. CO., New York, N. Y.

322. DIAMOND SWING JOINTS—4-page illustrated folder describing the Diamond line of ball, swing and revolving joints for use on any system handling air, gas, steam, oil, or any fluid where reflexible connection is needed. — DIAMOND METAL PRODUCTS CO., St. Louis, Mo.

323. TENTER FRAME DRYER—Illustrated folder describing the features and operating principle of newly designed, high speed tenter frame dryer.—NATIONAL DRYING MACHINERY COMPANY, Philadelphia 33, Pa.

CARDING, SPINNING, WINDING, ETC. . . .

401. LUMMUS DUSTLESS, STEEL, BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking. — ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

407. CARD GRINDER INFORMATION—Folder on care of card grinders, part replacements, etc.—E. S. ROY & SON CO., Worcester, Mass., and Greenville, South Carolina.

409. ROTO CONER—Bulletin describing Universal rotary traverse winder, known as the Roto Coner, producing open wound cones for knitting and warping; parallel tubes for package dyeing, twisting, and sale yarn.—UNIVERSAL WINDING CO., Providence, Rhode Island.

413. SONOCO PRODUCTS—A 60 page illustrated booklet giving descriptions, specifications and charts of the many Sonoco products, including bobbins, cones, tubes, cork cots, roving cans, spools, rolls, etc.—SONOCO PRODUCTS CO., Hartsville, S. C.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame, John Thorpe's invention of the ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.

419. TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

421. AUTOMATIC WINDERS — Folder describing latest winding equipment with full automatic operation. Only one automatic head for up to 100 spindles.—ABBOTT MACHINE CO., Wilton, N. H.

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WEAVING, SLASHING . . .

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521. STEEL WARP BEAMS—20 page catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, Milton, Pa.

522. STARCH STABILIZER — Leaflet describing new material to prevent jelling and to improve the cold fluidity of starch dispersions.—R. T. VANDERBILT COMPANY, New York 17, N. Y.

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524. JOHNSON WARP SIZER—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis. — CHARLES B. JOHNSON MACHINE WORKS, Paterson, N. J.

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602. ALUMINUM IN THE CHEMICAL INDUSTRY—Published by Aluminum Company of America. Seventy-eight pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses. — ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrates descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Preboarding and Automatic Boarding Machines for hosiery.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

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749. MONSANTO CHEMICALS—212 page illustrated buyers' guide for users chemicals including useful tables, chemical information.—MONSANTO CHEMICAL COMPANY, St. Louis, Mo.

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KNITTING . . .

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Maintenance of Full - Fashioned Knitting Machines

By ROBERT H. JOHNSON

How to determine when reconditioning is necessary and procedure for overhauling.

Photographs courtesy, Textile Machine Works

THE PROPER time to overhaul a full-fashioned knitting machine which has been in operation for a number of years, can be determined by periodically checking the following:

(1) Is the stitch formation in the fabric clear and evenly formed?
(2) Are the bad selvages reducing the efficiency of the seamers?
(3) Is the percentage of stockings to be mended unreasonably high?
(4) Is the knitting machine operator low in his efficiency percentage? Does he use more needles, sinkers, dividers, knock-over bits, and narrowing points than normally required?
(5) Does the machine fixer spend more than average time on the particular knitting machine in question?

If an unfavorable answer is obtained for the majority of these questions, it is time to overhaul and the following procedure is recommended.

Overhauling Procedure

Sinker Heads. An examination of the sinker heads will reveal that the sinkers in the center of the head have more vertical play due to wear than the sinkers at the ends of the head; also that the sinker slots are worn more than the divider slots. This condition must exist because more fabric is knitted in the center of the sinker head than at the ends, and the dividers have considerably slower motion and less strain than the sinkers in the formation of the loop.

Unfortunately, due to this condition, the excess vertical play cannot be taken out of the sinkers with the stiffening screws or by filing the spacing blocks without getting the dividers too tight. Therefore the sinker heads should be re-slotted.

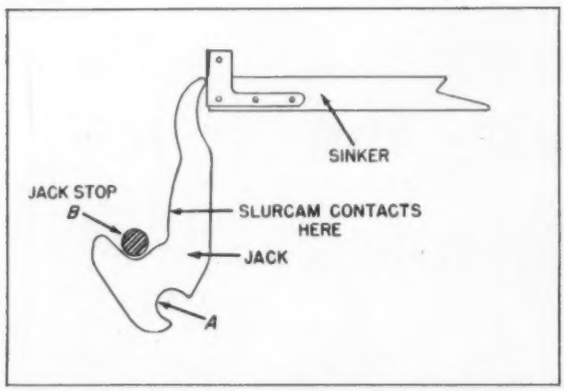
The press of the needles against the presser edge of the sinker head wears grooves at this point. These grooves can be removed by taking a milling-cut off the presser edge slightly deeper than the deepest groove. This has been found to be the most practical method in making a new and uniform press surface for the needles, but by taking this cut off the presser edge the relationship between the presser edge and the knock-over bit bed is disrupted.

For instance, if ten thousandths of an inch (.010″) has been cut off the presser edge, the knock-over bit bed must also be moved .010″ back in order to maintain the proper relationship. This relationship is important in order that the needle motion prescribed by the cams follows the contours of the knock-over bit as intended.

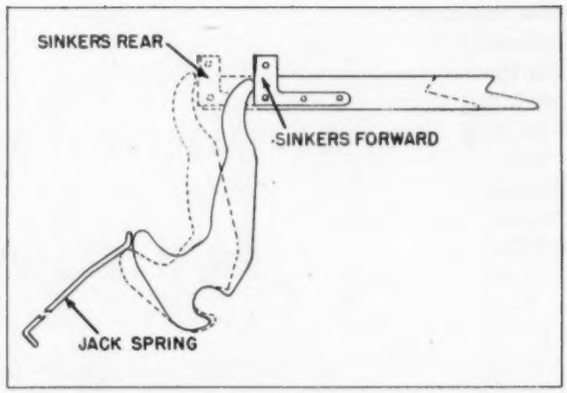
The method used to move the knock-over bit bed varies with the several types of full-fashioned

Enlarged photograph showing a cut-in sinker throat. Sinkers like this cause the formation of smaller loops and appear as a tight vertical line in the finished stocking.

Enlarged photograph of a cracked sinker nose. This will cut the yarn, making cut-holes in the knitted fabric.



Jacks control the individual forward motion of the sinkers. Sketch above shows slurcam contact point on jack. Jack axle supports jacks at A.



This sketch shows the jack spring exerting a slight pressure on the jack in its forward position, checking the rebound of the sinker.

knitting machines. However, on the "Reading" machine the knock-over bit bed bearing cap can be cut down enough so that a new bearing surface can be milled in to conform with the amount taken off the presser edge of the sinker head.

New sinkers, dividers and knock-over bits should replace the old. An examination of the sinkers, dividers and knock-over bits will show nicks worn in from the yarn, especially in the throat of the sinker. It may be necessary to use a magnifying glass to see these yarn nicks, but however slight these nicks may be, it is essential to have absolutely smooth and unworn sinkers, dividers and knock-over bits in order to knit a fabric with evenly formed loops.

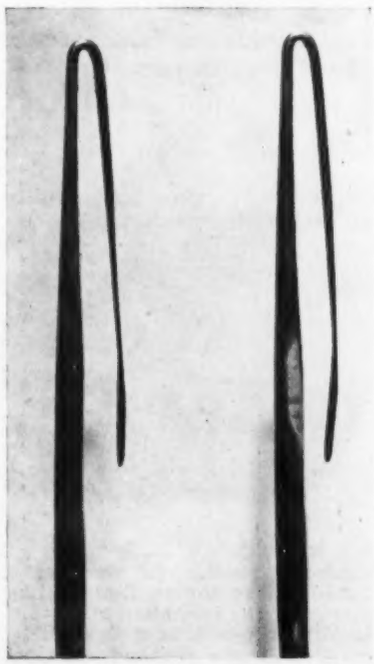
The verge plates should be reground so as to have a straight and true striking surface for the sinkers. If the verge plates have replaceable inserts, make certain they are tight before grinding.

Jack Beds. The jacks control the individual forward motion of the sinkers. This sinker motion pushes the yarn between alternate needles preparatory to forming the loop. Unevenly worn jacks or jack axles will not allow the sinkers to push an even amount of yarn between the needles, causing distorted loops. Therefore, new jack axles should be used.

The jacks probably could be reground to have an even striking action on the sinkers. But after consideration is given to the storing of reground jacks for individual machine replacement parts and the difference in the cost of new and reground jacks, it may be found that new jacks are preferable.

Jack Spring Beds. The function of the jack spring bed is to check the rebound of the sinkers by exerting a slight pressure on the jacks in their forward position. At this point the sinking of the yarn between alternate needles is completed. There is very little wear on the jack springs. Aligning the springs by pliering and cleaning the jack spring beds is usually sufficient for proper functioning.

Good examples of wear of needle beards caused by press against the sinker head presser edge and press against the narrowing points.



Needle Bars. The needle bars are positioned by the regulating action to receive the sinking and dividing of the yarn and to control the size of the loops. After the loops have been formed around the stem of the needle they are held in this position by the sinkers and dividers.

The cam motion moves the needles downward until the loops are at the head of the needles under the beards. The spring beards are then pressed against the presser edge of the sinker head so that the tip of the beards is forced into the groove of the needle stem forming an eye. With the needle beards in this opsition the loops are pulled through the previously formed loops and the course is completed.

The importance of properly aligned needles parallel to the sinker heads can readily be seen since they control the size of each individual loop. The needles and more especially the beards also have a tendency to lose their resiliency due to the repeated press action. Re-needling the needle bars is essential.

Welt Bars. Whether or not the welt hooks should be replaced can be determined by inspection. Whatever the decision, the welt hooks must be exactly spaced and in alignment in order that the minimum amount of time is used

by the operator in placing the welt bars between the needles to receive the first loop. The end guide sections of the welt bars that slide over the take-off bridge in drawing the fabric from the needles will show wear.

This can be repaired by drilling through the center of the guide section, counterboring and riveting in a steel button (similar in appearance to a large flat-headed rivet) to act as a new surface. Later type welt bars on "Reading" machines are equipped with removable guide plates which can be replaced.

Narrowing Fingers. A certain amount of needle-press against the narrowing points is needed for the purpose of lifting and transferring the loops on the needles either to increase or decrease the width of the stocking, thereby forming it to fit the leg; hence, the term "full-fashioned stocking."

The press of the needles against the narrowing points tends to wear the tip and the groove of the narrowing points. Also, the clamping papers become oil soaked and cut, making it difficult to keep the narrowing points in alignment. Best results will be had by repointing the narrowing fingers.

Lock Stitch or Picot Bars. The amount of wear on the picot points depends largely on how much the picot bars must be used to manufacture the style desired. Vibration caused by the narrowing motion also accounts for a certain amount of wear on the tips of the picot points when the picot bars are placed in their inoperative position, especially when the picot points are allowed to rest on the point guard rail. Inspection will determine whether the picot points should be replaced.

This completes the list of the more direct fabric forming mechanisms. It will be necessary for hosiery manufacturers not equipped to do this kind of reconditioning work, to send these parts to a competent concern specializing in this type of work. In the meantime, while the reconditioning of these parts is in progress, the following program can be followed in which the machine fixer can participate.

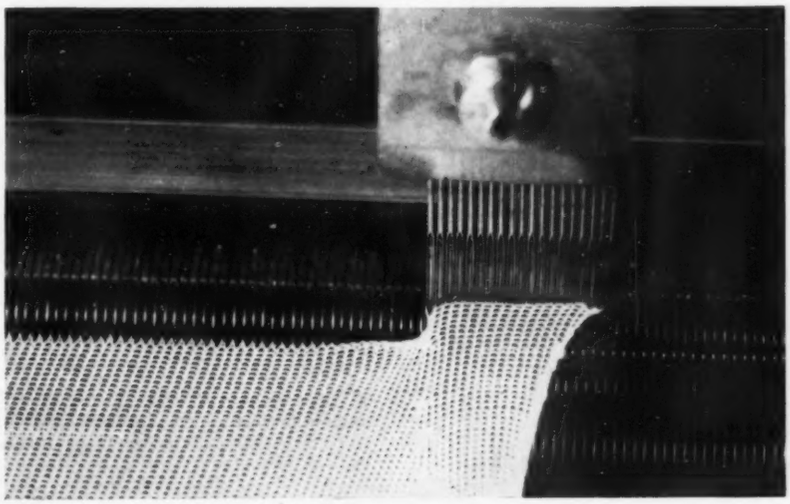
Before the machine is shut down for overhauling, it is wise to decide whether or not any attachments can be added to improve the appearance of the fabric or aid in manufacturing hosiery more economically. If attachments are to be added, work on them can begin at this point.

Cleaning. The ring tension device, snappers, yarn carriers, slur-cam boxes, and friction boxes should be taken off the machine and thoroughly cleaned. Time can be saved in cleaning by immersing a number of the more irregular-shaped parts in a boiling hot water and soda solution and then carefully wiping dry to prevent rusting. A commercial solvent can be used for cleaning the larger sections of the machine structure. Whatever method is used in cleaning, it is important to do it thoroughly to attain good results.

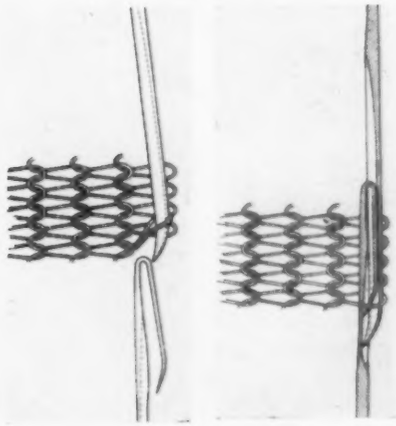
Leveling and Aligning. The front bed should be removed and the burrs at the dowel pin and bolt holes should be filed so as to make a true surface for leveling. The back rail should be leveled first, starting at the center of the machine and working out toward the ends. Make certain that the back rail is level before leveling the front legs. The leveling shims must all be tight under the legs and can be checked by tapping with a small hammer. Vibration of the machine will often work oil soaked shims out from under the legs. In replacing oil soaked shims with new ones, a dab of shellac between the shims and around the edges will help to prevent this condition.

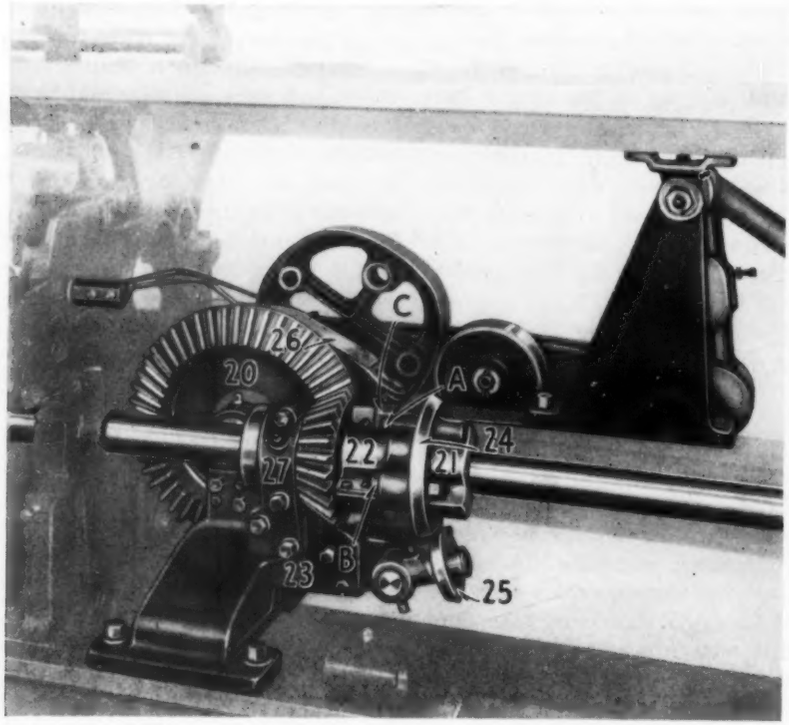
After the final check at leveling, an ordinary fish line should be tightly spanned across the entire length of the frame. This can be done at the upper finished surface of the back rail in such a manner that the line extends an equal

Close-up view of narrowing needles carrying loops over, thereby narrowing the stocking to fit the ankle.



Drawings illustrating method of transferring loops in narrowing. At left, the loop is being transferred. At right is shown the press of the needle against the narrowing point, ready to take the loop off the needle and transfer it to another needle.





View of coulier motion showing the coulier gear (20), clutch (21), and gear pinion (22). Points A, B, and C are those at which the clutch engages with the bevel gear pinion. These points should be checked for wear.

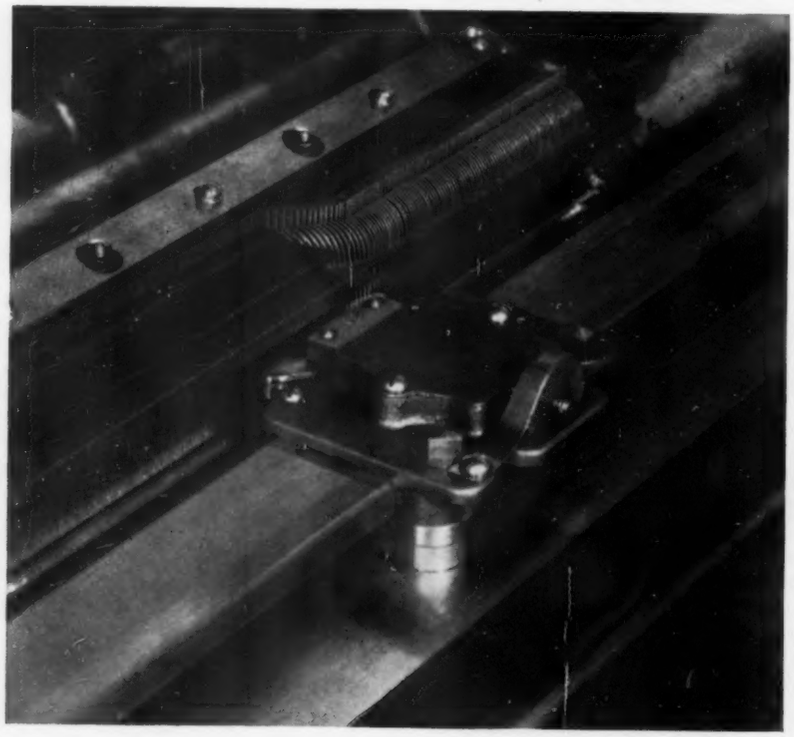
distance from the finished surface at both ends. This distance should be the same over the entire length of the machine to prove alignment. It may be necessary to bump certain legs with a heavy sledge-hammer to get the desired distance and to properly align the frame.

Cams. If for no other reason than to gain a feeling of assurance, it should be seen that cams are properly set to gauge. The cam contours of each set of cams must be identical and should be checked for wear or unevenly set cam bits. Badly worn cams can be repaired or replaced with new ones. Cam bits should all be set even with the cam contours.

Equalizing Cam Rollers. Regulating, needle bar, press, back catch bar, and front catch bar cam rollers should be equalized; that is, the cam rollers from each individual motion should be set with an equal amount of pressure on each of their respective cams. The springs are usually removed so that there can be no twist in the shaft. Adjustments are made with the cam rollers resting on the round portion of the cams.

In case the cam rollers are arranged so that the removal of the springs will cause them to fall away from the cams, they must be equalized by taking off one spring at a time and using a thickness gauge between the cam and the roller. After the cam rollers are all equalized and the springs replaced on the cam levers, the regulating and knock-over motion should be set so that the proper clearance will be had between the cams and rollers.

Coulier Motion. The coulier motion transforms the rotary motion of the cam shaft into the reciprocating motion which is transmitted to the slurcam boxes and friction rods by the long rocker arm. The automatic shifting of the cam shaft into the narrowing motion causes the clutch to disengage the bevel gear pinion and simultaneously tightens the brake band on the coulier gear, immediately stopping the reciprocating motion for one revolution of the cam shaft.



A rear view of the sinker head and jack bed. The slurcam box is shown in operation pushing individual sinkers forward by means of the jacks.

Because of the importance in the proper functioning of this mechanism, it is necessary to keep it in good working order at all times; nevertheless, the clutch and bevel gear pinion can be checked for wear at the points where they engage. Too much play at these points will cause a back lash in the cam shaft.

The coulier gear and cam must be held absolutely tight by the keys in the coulier shaft to prevent a back lash in this unit. In conveying the reciprocating motion to the carrier rods, the excess play in the rocker arm, connecting link, and pitman bearings, is multiplied by the leverage of the rocker arm, causing an undesirable movement of the yarn carriers. Bad selvages or needle breakage will result. All badly worn bearings should therefore be rebushed, so that the bearing pins fit snugly.

Friction and Friction Rods. The friction rod bearing surface of the friction box has a tendency to wear oval shaped. If this condition exists the friction box should be replaced. The friction leathers must be tightly glued and riveted to the friction shoe and fitted into the friction box so as to work freely without any play at the ends.

Excess play in the friction slide is also objectionable. Friction rods can sometimes be moved from one end of the machine to the other, so that the worn portion of the friction rod will be located at the section where there is no friction box. If this cannot be done to satisfactory advantage, the worn rods must be replaced. Badly worn friction rod bearings can be rebushed.

Slurcam Boxes. It is important that the sinking of each individual loop between the needles is completed before the yarn for the next loop comes in contact with the needles. This is controlled by the contours of the slurcam surface. Excessively worn corrugations on the cam surface of the slurcam will cause a spasmodic movement in the motion of the slurcam boxes. This worn cam surface can be reground and polished.

Care must be exercised in grinding so that too large a radius is not ground at the point where the forward motion of the jack is to be completed. A radius too great at this point will cause a delay in the completion of the sinking of the loop. A slight radius, however, will reduce the shock placed on the sinker and consequently cut down sinker vibration.

Carriers. Excess vertical play of the carrier rods causes the carrier rods to raise when they hit the carrier end stops, resulting in unsightly selvages. This play can be overcome without taking the carrier rods out of the machine, by simply removing several of the carrier rod brackets and filing the top surface, then refitting the lids so that the carriers move freely without play.

A considerable amount of running time is required to wear the carrier rods unevenly. But, if this is the case, it is best to use new carrier rods where they are needed. Carrier holders, yarn guides and carrier tubes that are cut by the yarn should be replaced.

Narrowing Heads and Narrowing Machine. Provisions for adjustments to compensate for wear are made on both narrowing and carrier spindles. End play can be taken out by moving the inside spindle bearing toward the outside bearing. Excess play in the spindle nut can be taken up by tightening the bronze bushings and adjusting the screws on the nut itself.

The narrowing machine should be aligned with the gauges provided for this purpose. Excess play in the narrowing rods can be removed by file-fitting the narrowing bracket lids; although, on certain types of machines it may be necessary to remove the picot shaft in order to do this.

Catch Bar. The catch bar must be taken off the machine and inspected to determine its condition. Grooves are cut into the catch bar slot by the sinker and divider backs. If these grooves are worn deeper than ten thousandths of an inch (.010") the catch bar should be replaced with a new one.

Snapper and Ring Tension. Yarn causes the snappers and rings to become cut. Cut rings should be replaced with new ones. Snapper porcelains can be removed and the cut section of the snapper filed smooth and polished. New porcelains can be used, or the old ones turned so that the cut will be opposite the point where the yarn slides over.

Proper gauges should be used in aligning all parts, and an effort made to maintain this alignment. A good thought to keep in mind is that if all sections are set the same (everything else being equal) they will all work the same.

The most important points of wear and methods of repairing have been described in this article. It was written with the mechanisms of the "Reading" machine in mind, but principles may well apply to any make of full-fashioned knitting machine.

Questions to the Editor

EDITOR TEXTILE INDUSTRIES:

We sometimes have trouble in getting clear shades when dyeing our pastel colors. We wonder if some of your other subscribers have a process they think is good. Perhaps they'll let us know what they consider best for mercerized cotton hosiery.

CONTRIBUTOR No. 7834

◆

EDITOR TEXTILE INDUSTRIES:

Our mill has not used naphthol colors to any great extent in the dye room, and we would like to see a brief discussion of the use of such colors by some dyer who has had experience with them. We make mercerized cotton anklets, mostly.

CONTRIBUTOR No. 7835

◆

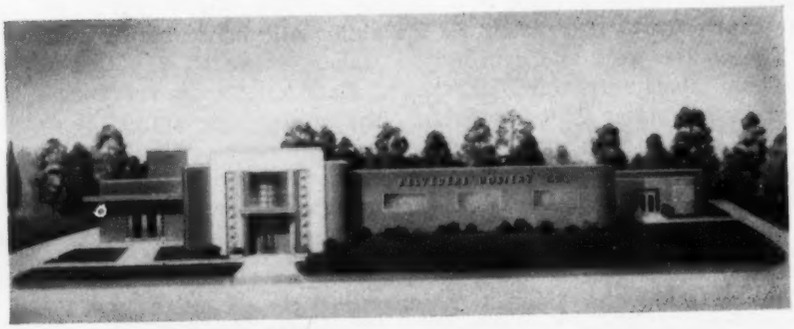
EDITOR TEXTILE INDUSTRIES:

I'd like to read a discussion regarding the dyeing and aftertreating of darker shades of mercerized cotton hose. Our knitting mill runs browns and Navy blue from time to time, and naturally I would be interested in this subject.

CONTRIBUTOR No. 7838

A Modern Full-Fashioned Plant

Belvedere Hosiery Company



Architect's drawing of Belvedere's new plant.

Staff Prepared

A CREDIT to the full-fashioned hosiery industry, the Belvedere Hosiery Company at Charlotte, N. C., maintains a prominent position in the ranks of hosiery mills that have kept in step with the modern trend. The facilities for manufacturing fine quality nylon hose have recently been completed, and the latest equipment has been installed in a building which embodies the utmost in hosiery mill design and construction features.

As shown in the accompanying illustrations, the plant is modern in every respect from reception room to the boiler room, and bricks, tile, and glass blocks were used to additional advantage for excellent appearance. The building is equipped with air conditioning throughout, and refrigerated air is circulated through the boarding and dyeing departments where the heat could otherwise become excessive.

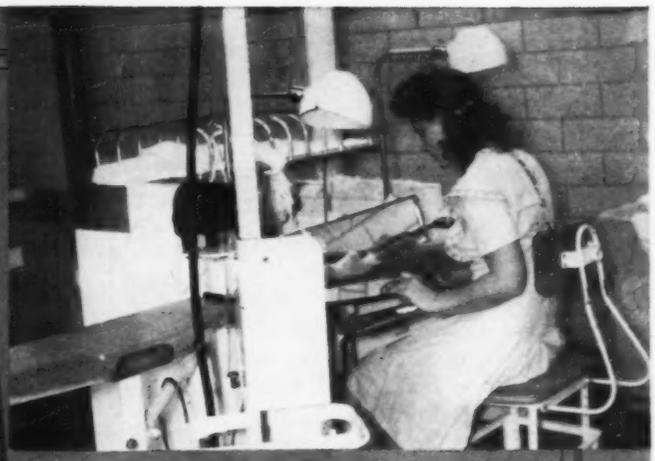
The walls of the building are of tile construction to a height of eight feet above the floor level. Floors are of half-inch thick asphalt tile except in the knitting and dyeing departments. Fluorescent lighting is used effectively, and the power plant is equipped with oil burning steam generating boilers.

J. M. Hatch is president of this modern full-fashioned mill which was constructed under the supervision of Biberstein & Bowles, architects and engineers.

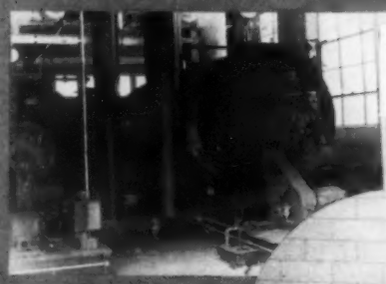
Above, close-up view of operative inspecting hosiery. Note cut-out inspection table.

Below, general view of room where final inspection, pairing, and packaging are performed.

Scene in the modern seaming department. Note trays used for handling hosiery.

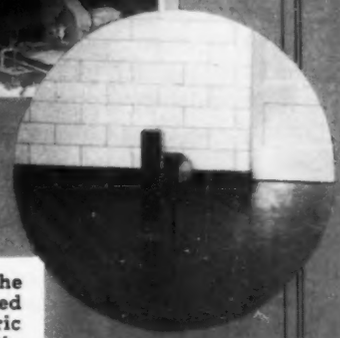


An operative is shown using one of the new hosiery inspection machines.



View in boiler room. Boilers are oil-fired.

Two of the 32-section, 51-gauge Lieberknecht full-fashioned hosiery machines at Belvedere. A feature of these machines is that the gauge number is knitted into each stocking.



All doors in the plant are equipped with an "electric eye" for automatic opening and closing.

The dyehouse is equipped with the latest Smith-Drum stainless steel dyeing machines. A modern laboratory is adjacent to this department, facilitating tests before and after dyeing.

Preboarding and boarding are completed in one department at Belvedere. Shown above are some of the new boarding machines. Both vertical and horizontal types are used.

Maintenance of

Seamless Knitting Machines

By JEROME DODGE

Systematic program of maintenance recommended. Records prove their worth. Lubrication stressed. Cleaning is important phase of the knitting machine maintenance program.

MOST SEAMLESS mills today have two maintenance crews on the job; one crew takes care of anything from a leaky roof to a blown fuse, and the other looks after the knitting machinery. Sometimes as we watch both crews in action, we wonder if the word maintenance is really understood. Maintenance, according to Webster, means the "upkeep of property and equipment," and upkeep, as we understand it, does not mean to patch up to get by. No, it means to do a first class repair job, making it as good as new if at all possible. So with this latter thought in mind, bear with us while we discuss ways and means which will help to keep knitting machines turning out production.

The term knitting machine covers three distinct types of machinery; namely, ribbers, for the production of ribbed tops; plain knitting machines, such as B-3 and B-5 Scott and Williams, and Banner machines which are used to produce transferred rib top goods; and fully automatic machines such as Scott and Williams' Model H H, Model K, Komet and Links and Links machines, and Banner wrap elastic top machines.

For this discussion we shall limit our remarks to maintenance of named equipment, beginning with ribbers and closing with knitting machines.

Upkeep of Ribbers Standards—Adjustments

One of the really important factors in rib top production, frequently overlooked, is uniform knitting according to a set standard. By that we mean a given style of top should be knit to finish six inches, but when we check up we find tops finishing 5½", 5¾", 6", or 6½". If and when this occurs, there are a number of things which *must* be done in order to prevent recurrence.

First, make sure that each machine on a given style has the correct number of chain links. This will assure a given number of courses per inch of knitted fabric.

Second, measure tops and make necessary adjustments at least *twice* per shift so all tops will be uniform in overall length on a given style.

Third, check dial and cylinder stitch cam adjustments or settings so the stitch formation on both sets of needles will be uniform.

Swing cams, stitch cams, guard cams, etc., can be repolished a number of times before it becomes necessary to replace them. A fixer is shown here grinding and polishing cams. Note safety device over grinding wheel.

Fourth, keep all dials set at a given distance above the cylinder.

Careful attention given to these four factors will assure uniform elasticity, which is what it takes to make a good rib top. You may say, "That is simple"; and right you are. The hitch is—find a rib machine fixer who will follow through consistently, day in and day out. They are few and far between.

The knitter *must* have a suitable loose course or topping line to get production. Too large a loose course will cause trouble for the rib fixer; too small a loose course makes it hard on the topper and knitter. There is a happy medium; find it and stick to it, and finally see that cylinder and dial needle make the same *size* loose course. Keep them *balanced*.

Upkeep of Ribbers Repairs—Overhauling

The best way to keep a line of ribbers rolling along is to set up an overhaul program whereby each machine is given a thorough checkup at given intervals—then insist that this program be followed to the letter. This can be accomplished by adopting a tag system which shows the last overhaul date and *who* did the job. The *who* is important on the tag; even the habitual slacker will have to fall in line and get his name on some tags.

How often to overhaul your machines will depend on the type of goods being made, speeds at which the machines are being run, the number of hours per week of operation, and numerous other factors. In any event, lay out your program and follow through for six months or a year. By that time you will be able to make adjustments either way in so far as the time element is concerned.

Overhaul at Regular Intervals

Getting it done is the problem. Many rib fixers prefer to wait for trouble to develop and then correct it.

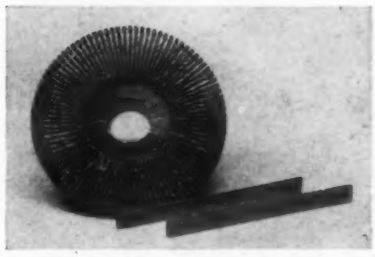
The better way is to prevent trouble by dismantling machines (note parts in Fig. 1) at regular intervals, removing all foreign matter from the needle butt races, and repolishing all cams which control needle action. Swing cams, stitch cams, guard cams, etc., are bound to develop small nicks and rough places. These cams can be repolished a great number of times before it becomes necessary to replace them. One small nick or rough place starts needle butt vibration, which means additional vibration, more nicks and gaps, and eventually trouble.

Ever see a small hole on a much traveled paved or dirt road? At first traffic rolls over it; soon traffic avoids it if possible, or slows down. Why? The small hole has *increased* in size. This is simple country boy reasoning; apply it to the millions of revolutions your ribber cylinder sections and dial caps make.

The constant friction of needle butts against the camming surfaces which control needle action and movement, and constant friction of needles against the side of the wall which separates the needle slots, are factors producing wear, which in turn calls for maintenance or upkeep.

The Dial

The one part of a ribber which bears the most abuse is the dial. Press-offs, load-ups, needle butts becoming jammed, bent or broken, faulty action of swing cams, and the like cause the dial walls to become bent and rough. Much depends on how well the dials are repaired. Bent dial walls can be straightened by using wall straighteners—pieces of flat tempered steel stock which fit into the needle slots; an old screw driver blade or piece of drill rod of the same shape, and a lightweight hammer are the only tools required to drive bent walls back to normal position. Use the wall straighteners in pairs, placing one on either side of a bent wall to avoid overdriving or bending in the opposite direction.

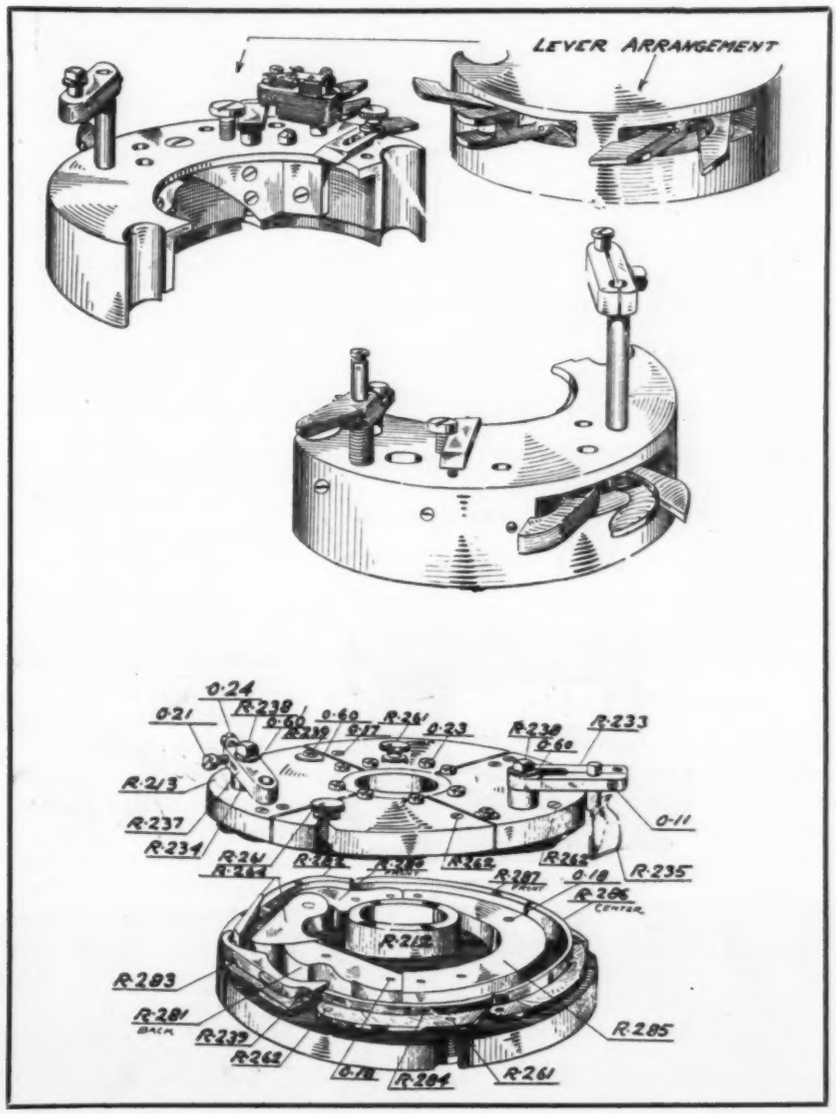


Much depends upon how well ribber dials are repaired. Bent dial walls can be straightened by using flat tempered steel wall straighteners as shown here with a damaged dial.

Damage to dial walls is usually confined to the upper surfaces, not down deep into the slots, and rough or galled places can be removed with a slot file. A slot file should only remove burrs or rough places, *not* wall stock; excessive or unnecessary use of a slot file should be avoided.

We have always advised ribber fixers to grind off all cutting sur-

Fig. 1.



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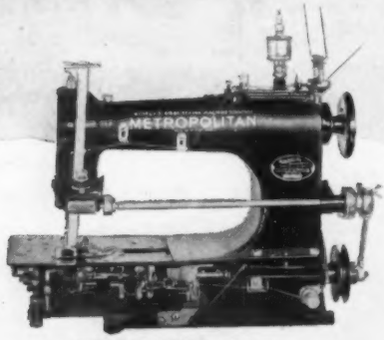

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WILLCOX & GIBBS SEWING MACHINE CO.

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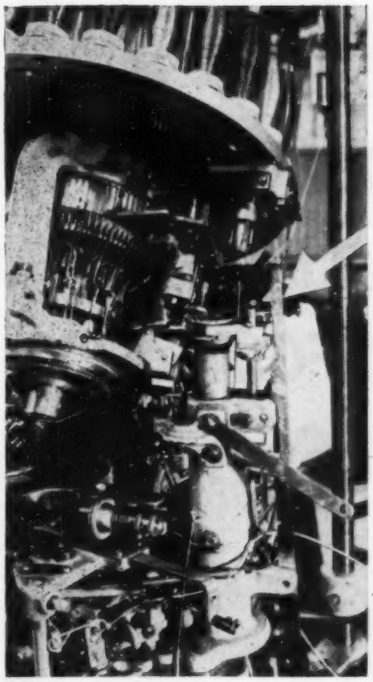
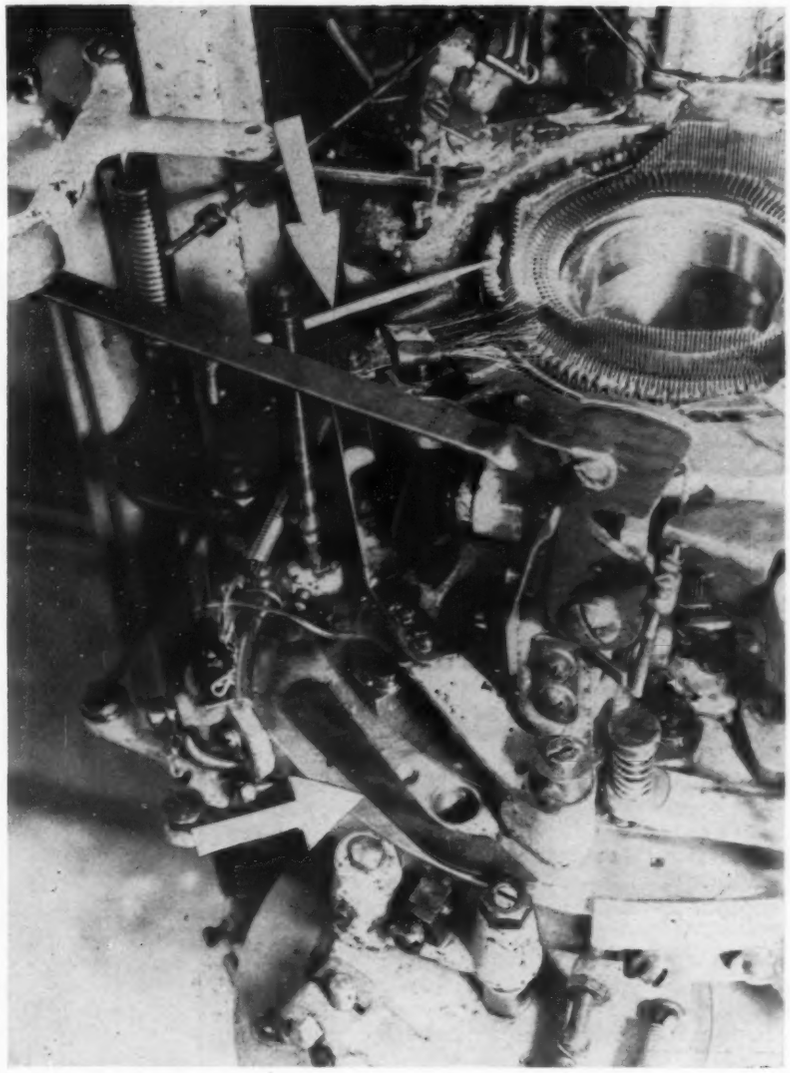


Stop motions are put on machines to prevent waste and damage. The one shown above stops the machine when the head is lifted for inspection, etc.



Of the two stop motions shown above, the stop motion nearest the needles prevents seconds and damage to the machine when a needle fails to pass underneath it. Stop motions should be checked and tested regularly.

faces of one side and both edges of their slot files to prevent cutting down into the bottom of the slots and to avoid filing of smooth walls adjoining a rough one. Unnecessary filing of walls simply makes the needle slots wider; straightening should be the *rule* and filing the exception. Many fixers follow the foregoing in reverse.

Proper upkeep of ribbers includes keeping gaps out of yarn feed fingers and yarn feed holes in old style yarn carriers. Miles of yarn running through feed holes will cut gaps in them; this causes press-offs, which mean waste and possible damage to needles, needle slots, and needle controlling cams.

Stop motions, electric or mechanical, should be checked and tested to make sure they *will* function. They are put on machines to prevent *waste* and damage to machines.

Ribber Lubrication

Ribbers, like any other piece of machinery, require regular lubrication. Cylinder and dial needles should be lubricated at least once for every eight hours of operation. Exceptionally light oils should be avoided; oils should have sufficient body or viscosity to stay put, not act as a flushing agent.

All bearings, beds, pulleys, worms, and takeup assemblies should be lubricated at least once weekly. Needle oil is too light for bearings. Something equivalent to a 20 or 30 weight automobile motor oil will serve nicely for bearing oil. The types or kinds of oil used for all-round ribber lubrication is important, and doing a thorough job at regular intervals is equally important.

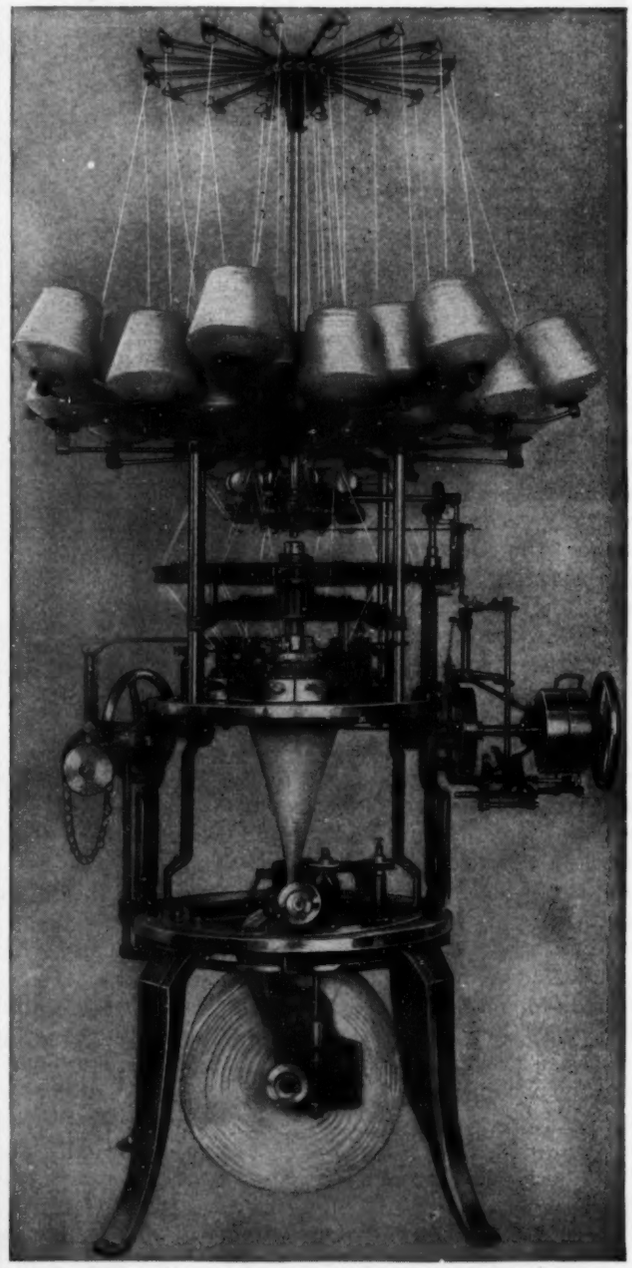
The wheels of industry run on oil. There is no substitute for it. Lubrication is maintenance applied with an oil can.

Cleaning Ribbers

Ribbers that are properly maintained will produce more good work if they are kept clean, inside and out. Excessive oil drippings should be wiped off; accumulations of lint can be wiped or blown off. The important factor in so far as cleaning is concerned is not only *how*, but how often and how well the job is done. It takes longer to repair dirty, ill-kept machines, and costs more to operate them than clean machines. Ma-

WILDMAN Multiple-Feed RIB MACHINE

You NEED it for VOLUME for STYLING for UNIFORMITY of SIZES



To the man in the mill who is responsible for increasing production, this machine's most outstanding achievement is that it

DOUBLES PRODUCTION or BETTER

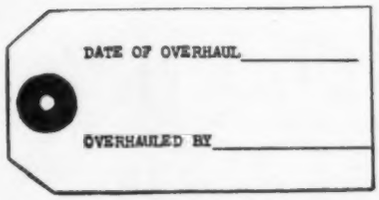
on exactly the same floor space that a regular 8-feed machine occupies in your plant.

To the man interested in bettering quality and style, it immediately offers far greater opportunities for style variety.

To the man who is a stickler for precision, it feeds the yarn under such even tension that the uniformity of garment sizes is easy and constant.

May we tell you about its other splendid and exclusive features?

WILDMAN MFG. CO., Norristown, Pa.



A simple tag provides a good maintenance record of major overhauls. The fixer on each shift should know what the fixers on other shifts are doing.

chines covered with cotton or wool lint and oil drippings could cause a nice fire, to say the least. Clean machines are a sign of good housekeeping and good workmanship.

Maintenance of Knitting Machines

Two simple words—repairs and adjustments — cover all knitting machine maintenance and production problems. There are many other factors which enter into the picture, to be sure; however, the two predominating factors on which the production of first class merchandise depends are repairs and adjustments. Repairs properly made keep machines in first class running condition; adjustments properly made assure high class merchandise.

Machine Repair Records

The need for overhauling machines at regular intervals and keeping a record of this work by tags or otherwise is even more important on knitting machines than on ribbers, for there is much more at stake. The machine fixer on one shift should know what the fixers on the other shifts are doing, and the knitting department heads should know what *all* shifts are doing.

How often the various types of machines should be overhauled will depend on the number of hours and shifts they are running per week, the kind of goods being produced, and other factors. We feel that every fully automatic machine should be gone over thoroughly at least once after each 12 months of two-shift operation. We are not implying that gears, clutches, driving mechanism, cylinders, etc., should be removed and replaced when a machine is overhauled. However, on English rib machines, both domestic and foreign makes, it is necessary to remove the upper cylinder in order to get at other important mechanisms.

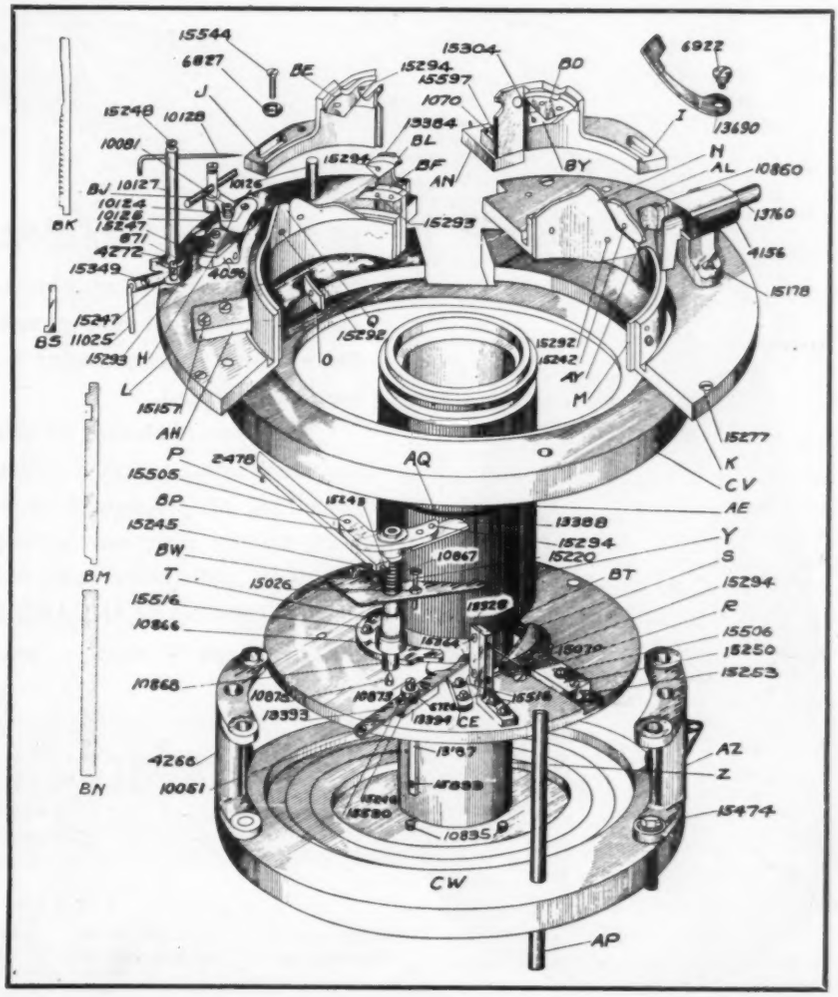
By overhauling we mean, first, a thorough cleaning of needle butt races, careful inspection of all cams which control needle and sinker action and movement, inspection of needle and sinker slots, and thorough cleaning of sinker slots. Look for loose screws, cracked or chipped cams, excessive lost motion in butt races at points where stitch formation takes place; check settings and adjustments which cannot be seen from the outside.

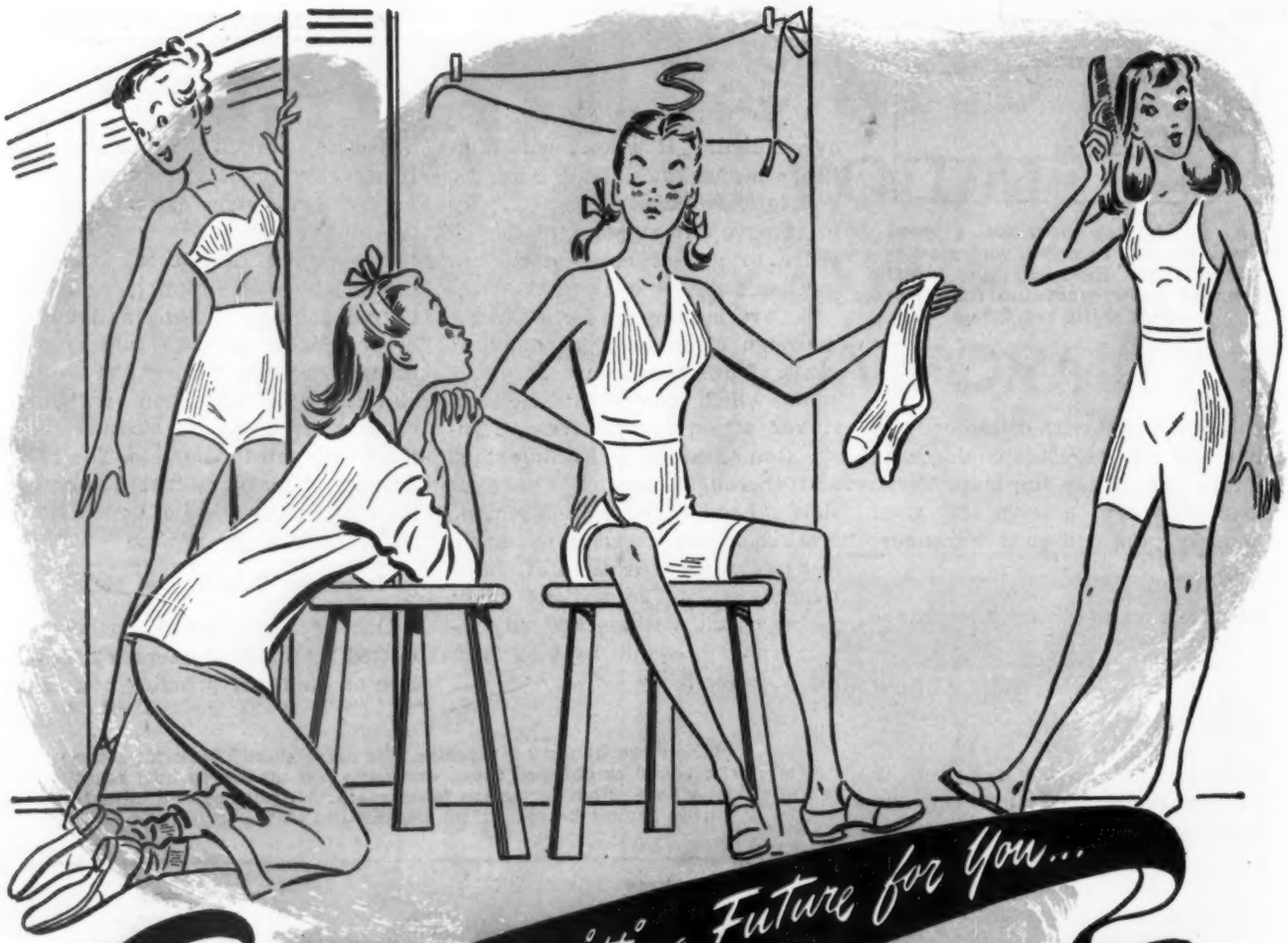
Second, repolish all cams in serviceable condition, replace damaged or badly worn parts. Replace worn cylinder bands and sinker bands *before* they break (while the machine is running) and do untold damage. Raising and lowering picks become worn or chipped, and frequently they will run in this condition without causing trouble, but sooner or later they fail to function. The resulting damage will cost more than replacing a part which has seen better days.

Improper Grinding of Metal

One of the greatest sins committed by machine fixers is excessive or improper grinding of cams

Fig. 2. When overhauling a machine, the fixer should look for loose screws, cracked or chipped cams, excessive lost motion in butt races at points where stitch formation takes place. All settings and adjustments cannot be seen from the outside of the machine.





A Bright Knitting Future for You...

MODERN *Standard Durene*

This smooth, even-running mercerized cotton yarn will enable you each day to turn out more garments, better knitted and better looking. Their greater beauty, comfort and wear will please your customers, keep them satisfied.

The secret of Modern STANDARD Durene's sustained quality is our nearly seventy years of cotton yarn manufacturing with complete control of all processes from selection of raw cotton to finished yarn, plus the many new developments brought about by our war experience; and plus our never ending search for ways to improve the quality of Modern STANDARD Durene.

STANDARD DURENE • SELO • MERCERIZED COMBED SAKS • THREADS

Standard-Coosa-Thatcher Co.

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and parts. In fitting new parts and repairing or reconditioning old parts, some grinding and polishing must be done. When a machine fixer grinds or polishes a cam in order to remove gaps, and he bears down hard enough to discolor the surface of the metal, he is working with his hands *only*, not his head. We mentioned this fact to a machine fixer. The cam he was grinding turned blue, and we said, "But, you have ruined the temper of that cam." He smiled, and said, "I'll rub the blue off when I polish it." The same thing can happen to up and down picks, sinker cams, yarn feed fingers, and a host of other parts on any type of machine.

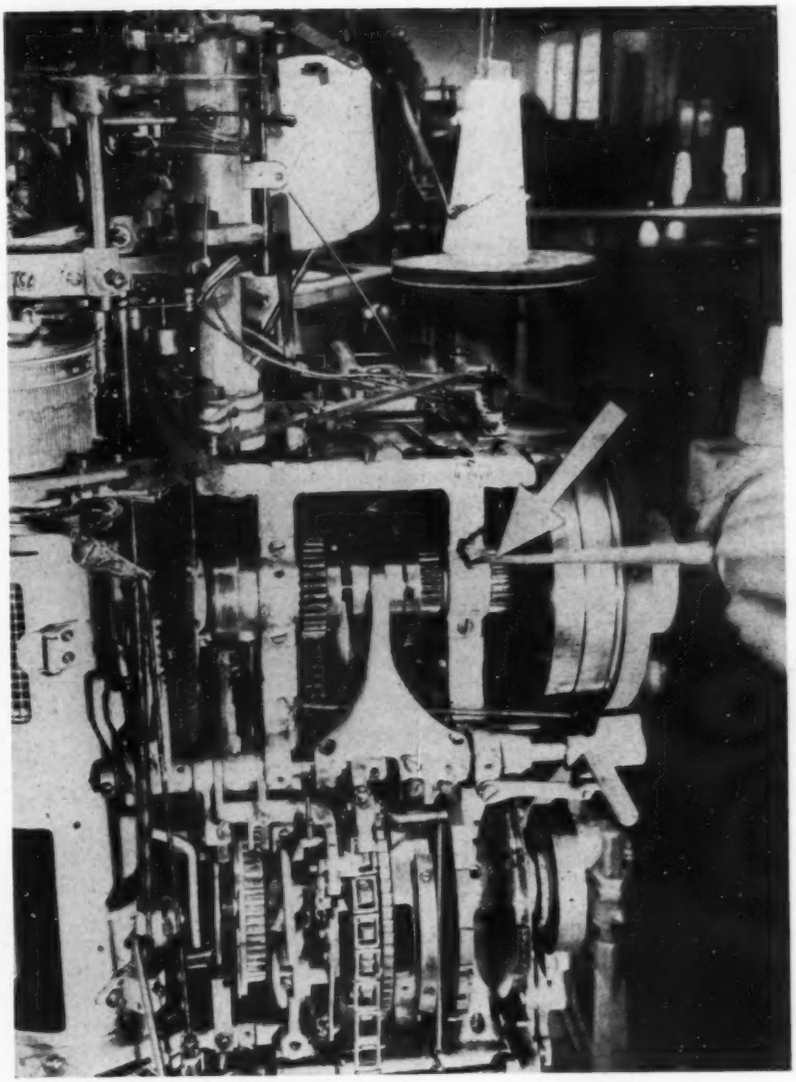
We do not agree with a man who said, "Throw out your grinding wheels and your machines will last longer." He may as well have said go barefoot and your shoes will last longer. We do say, avoid unnecessary grinding and be careful when you grind or polish. Know your metal. Don't invite trouble by overheating the surface, as it is the *surface* that must give *service*.

Making necessary adjustments to keep clutches shifting smoothly is often overlooked. Constant use never made a clutch shift too early, and normal usage only makes it shift late. A little grease may help a slow or late shifting clutch. Tightening the belt may make it shift (when the racket it makes is yelling: brother I am *not* getting in there on time); re-timing or advancing the shifting drum or cams is the right way to correct such trouble.

Inspect gears and pinions for worn, chipped, or broken teeth, as one bad tooth on a small pinion, driving or being driven by a large gear where the ratio is four to one, will produce four bad spots on the large gear. Remove the bad one and save the good one.

Most every knitting machine has brakes, tension, or friction devices. Most of these devices last so long and serve so well that they are overlooked or forgotten until trouble develops. Inspect them; make some minor adjustments today and prevent some major trouble tomorrow.

The suggestions we have made are only a small part of the knitting machine overhaul, repair, or maintenance picture. They can be applied to any make, model, or type of machine. The man who said "An ounce of prevention is worth a pound of cure" gave some expert advice on knitting machine maintenance. To that we add, any job worth doing deserves your best effort.



All bearings, beds, pulleys, worms, take-up assemblies, etc., should be lubricated at least once weekly. Lubrication is maintenance applied with an oil can, as shown here.

Knitting Machine Adjustments

Perhaps the reader may ask, why mention adjustments in connection with repairing or maintenance of knitting machines? The answer is simple — a line of machines, new or old, could be in perfect condition mechanically, but the production from these machines would not be worth a plugged nickel if they were not adjusted to produce good merchandise. In addition to adjustments, there must be set standards for overall lengths, elasticity at various points, uniformity in the number of courses per inch at various points, and proper fashioning for ladies' hose numbers.

The number of courses per inch of knitting should be the same in every size and for various diameters. Size changes should *not* be made by adjustment of stitch, but by increasing or decreasing the number of courses to give the de-

sired length. This can be accomplished within reasonable limitations.

Uneven knitting and unbalanced feeds in dual or three feed machines must be prevented; washboard effects in heel and toe construction are out.

Quality irrespective of price has once more become a determining factor in hosiery markets, and this trend will become still stronger in the immediate future. Controlled quality is directly related to maintenance, and quality must be secured in the knitting departments; first, by keeping machinery in good mechanical condition, and second, by keeping machines properly adjusted.

Strict rules should be made requiring that every machine be checked for proper size at least twice in each eight-hour run. While sizes are being checked, the machine fixer should inspect the work from each machine carefully and thoroughly. Changing stitch adjustments is one part of the job; inspecting for any defects which might impair the quality of the hose is equally important. Maintenance of knitting machines covers everything which must be done to turn out full production of high quality goods, beginning with the opening of a case of yarn and closing when the goods are sent to the next department.

Lubrication of Knitting Machines

Proper lubrication will keep maintenance costs down and prolong the useful life of knitting machinery. One type or kind of oil will not serve every lubricating need for any one machine, nor can any one oil be used to lubricate every type of machine. In order to secure the best results, it is advisable to divide your lubricating needs into three phases: 1. *Heavy oiling,* which includes the complete driving mechanism, grease packed bearings, ball bearing races requiring oil, shafting, pulleys, clutches, etc. 2. *Light oiling,* which takes care of minor moving parts such as up and down picks, yarn changing fingers, pivot points in levers, rod connections, plungers, and the like. 3. Needles and sinkers, dial jacks, dial castoffs and hooks, and sliders in English rib machines, etc.

Heavy oiling should be done once each week, except for grease packed bearings which should be checked yearly. Light oiling should also be done at least once weekly. Needles, sinkers, etc., should be oiled daily, but sparingly. Flooding any part of a machine with oil is not lubrication; it merely increases the production of oil stained goods.

There are three important factors which govern every lubrication need: 1. Select the proper kind of oil; 2. Apply it at regular intervals; 3. Do a thorough job.

Repairing, adjusting, and lubricating are three factors which assure a steady flow of production; convert them into a single factor and you have maintenance. Your production records should tell you whether or not your maintenance program is giving the desired results.

Cleaning Knitting Machines

Every knitting machine produces a certain amount of loose lint which always gathers at points where minor disturbances will cause it to be picked up by the yarn. When this occurs it may cause nothing more than a press-off, which means one piece of waste and would not be important. But multiply this occurrence by 10, 20, or 50 and your manufacturing cost goes up.

In many instances wads of lint will form in yarn tensions where they cannot readily be seen. This puts additional drag on yarns, resulting in tight knitting, short lengths, seconds, and waste. Knitting machines have become more complicated during recent years. On some types, a press-off at the wrong time or place can do much damage to needles and other parts, thus cutting production and increasing repair bills.

Cleaning machines can be a dangerous job. A piece of cleaning waste in the hands of careless or untrained persons may result in an ambulance call—then rushing the victim to a hospital to have what might be left of a few fingers or part of a hand patched up by a surgeon. You can hang signs all over the place cautioning people *never* to clean machinery in motion, but they are seldom heeded. Sometimes it takes the agonizing screams of a fellow worker with his hand caught between two gears or twisted around a shaft to drive home *safety* in cleaning.

Then, too, there is the ever present fire hazard—anyone who has seen a line of machines suddenly become a line of fire knows what we are saying. It really pays to keep machines clean. The more complicated they are and the higher priced your yarns are, the greater the need for keeping machines clean.

Pedestal-Mounted Felling Machine

Union Special Machine Co., Chicago, Ill., has announced a new pedestal model feed-off-the-arm unit.

Machines being built on the pedestal mount include Class 35700 feed-off, which means one piece of shirts and pajamas and Class 35800 units for heavier work, such as overall and work pants. The sewing heads are of the latest design but, instead of mounting on a table, the frame is modified to fit on a base extending from the pedestal.

The pedestal is a unit in itself containing the operating treadles enclosed in the base with operating rods enclosed in the column. The Electro-drive is mounted on a frame at the top of the column and is enclosed.

The frame that holds the motor and sewing head is adjustable horizontally and vertically to the position most suitable for the operator. The needle cooler, an integral part of this set-up, is mounted on the under side of the frame and automatically turns on when the motor is started to run the machine.

With this machine unlimited work space is available to the right of the operator. Unnecessary reaching is eliminated, thereby increasing efficiency.

Wisconsin's White Pine Forests Are Growing Again

Squandered with a lavish hand by the lumber barons 40 years ago, Wisconsin's famed timberland became a costly liability.

Production dropped from a peak of 3 billion to 332 million board feet a year, and 33% of the cut-over timberland was tax delinquent. Wisconsin was fast disappearing from the lumber business.

In 1931, to remedy the situation, Wisconsin passed the now famous Forest Crop Law under which forest lands, listed for scientific cutting, are exempt from general property taxes and tax delinquent lands can be redeemed on payment for reforestation at the rate of 10 cents per acre per year.

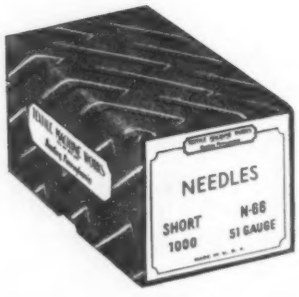
Thus, Wisconsin is rebuilding the vast empire of trees—on the theory that the only conservation worth considering is one which allows us to use our forests and have them too.

It's a slow process, but forestry experts say it's the only way to assure a bountiful supply of standing timber for the future.

Do you really have the money that you charged off for Depreciation in past years? Is it part of your "current" assets . . . or is it earmarked as a separate fund under "fixed" assets?

Write today on your business stationery for your copy of "Good Housekeeping in Business" —a pamphlet which presents what we believe to be a *logical* basis for handling depreciation money. We will be glad to send it to you.

TEXTILE MACHINE WORKS
READING, PENNA.



Touché . . . Thrillingly sheer, flawlessly-knit full-fashioned stockings score a point every time with fashion-conscious ladies. To obtain these finer qualities and more even textures in full-fashioned knitting, TMW Needles are "Fixture Drawn"* — a special TMW patented process that holds the needles straight and true. Let us put your needle bars in shape for faster, more accurate, more profitable knitting.

* Reg. U. S. Pat. Off.

TEXTILE MACHINE WORKS • READING, PA.

General view of stripe and plain fabric knitting machines at Gurney Mfg. Co.

Gurney Modernizes Throughout

By J. C. FARROW

IN LATE 1945, Gurney Manufacturing Company at Prattville, Alabama, started a modernization program designed to include everything from the mill village to the boiler room. Today, this program is nearing completion. An account of the new facilities and equipment is presented here.

A NUMBER of years before the turn of the century, Daniel Pratt started a small cotton mill on the banks of Autauga creek in the town which he had founded—Prattville, Alabama. Since that time, this mill has been operated with varying success by a number of companies. At the successful stages in the mills' operation, new buildings were added until the mill property consisted of two large mill buildings, a dye plant, an office building, and a village consisting of 78 houses.

By the middle of 1945 the mill was again offered for sale. The mill buildings and mill property were in an advanced stage of deterioration, and much of the machinery had been dismantled and moved away. The remaining machinery was bought in late 1945 by Gastonia Combed Yarn Corporation.

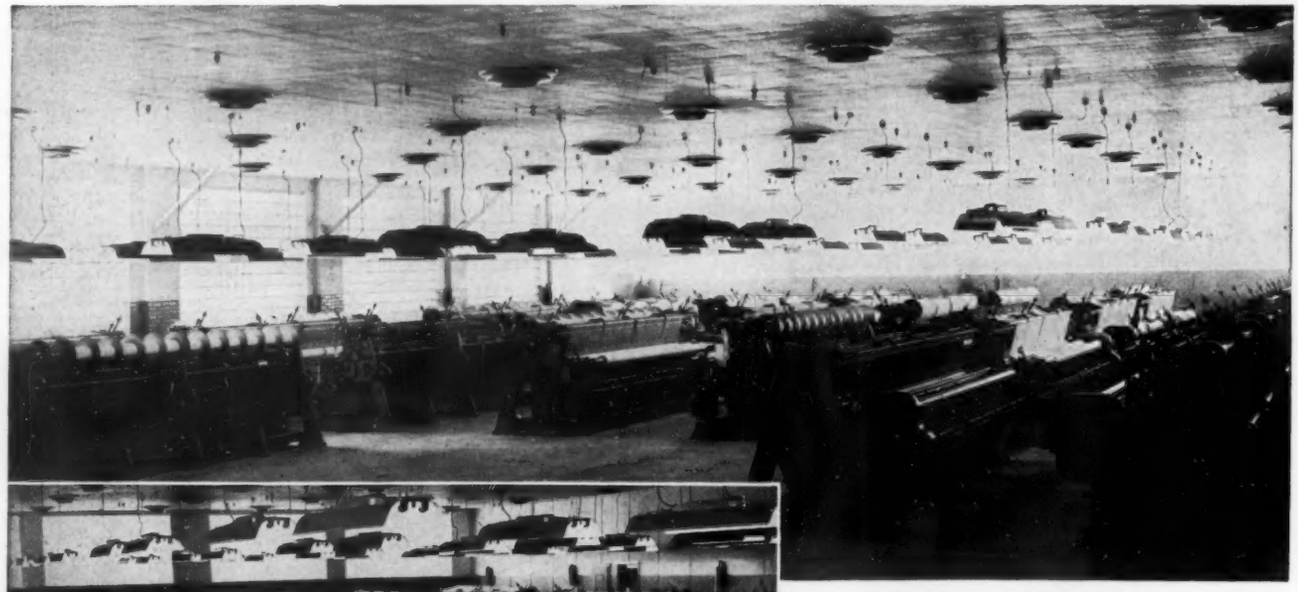
The new management had in mind moving this machinery to its mills in Gastonia, North Carolina. When a group of the civic-minded citizens of Prattville heard that the mill was to be moved and the town would lose this payroll, they approached the officials of the company with the suggestion that they remodel the mill properties and leave the mill in Prattville.

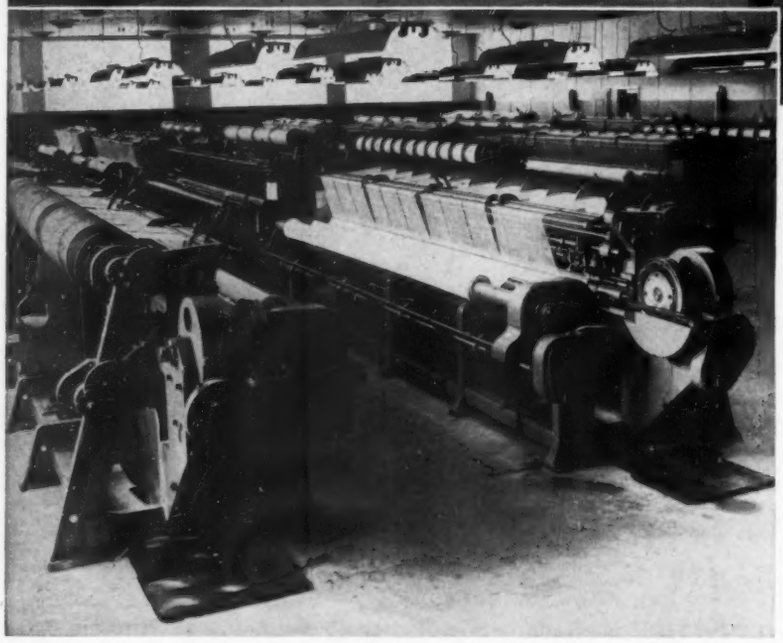
A number of meetings between these citizens and company officials resulted in the formation of Gurney Manufacturing Company, which was to repair the mill properties and convert this mill into a modern plant which would take raw cotton and convert it into finished garments.

Under the new management, improvements have been made until Gurney Manufacturing Company of today bears but slight resemblance to the mill of two years ago.

One of the first projects undertaken was a complete modernization of the village. Each house

"THEY RUN LIKE CLOCK WORK"





Courtesy Roselin Mills

Fabric Quality • Speed • Steady, even flow of production • Ease of operation • Economical maintenance • An almost unlimited pattern range — truly, these are elements of profitable production found in every Reiner unit and proved by actual production performance in knitting mills everywhere.

The new Reiner High Speed Tricot Machine has a cruising speed in excess of 450 courses per minute, with a knitting width of 168 inches (or 84 inches with still higher speeds). It takes 21 inch spools or any spools of the conventional size. It can be operated with either a pattern wheel or a chain link drive, the change-over being merely a matter of minutes. This gives the knitter a still wider selective pattern range of one bar or two bar tricot fabrics of rayon, nylon, silk, cotton, wool, etc., single-fibre or blended yarns. We also manufacture 3-bar machines.

The Reiner Line Also Includes:

Simplex Machines • Kaylooms • Raschel Machines • Warpers (full width and sectional) • Magazine Creels • Single Type Creels • Truck Creels • Skinner Racks • Thread Tensions (counterbalanced and disc) • Beam Loading Wagons • Hydraulic Beam Lift Wagons • Twin Knitters • Auto Heelers • Automatic Bobbin Winding Machines (for Quilting and Stitching Machines).

Since 1945 we have installed more than 300 units of this reliable and steady producer. Frequent repeat orders are evidence of its mounting popularity among knitters who know good machines when they see and use them.

ROBERT REINER INC.

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550-556 GREGORY AVENUE
WEEHAWKEN, NEW JERSEY

10 MINUTES FROM TIMES SQUARE. Take Bus Nos. 61, 67, 167 from the Times Square Public Service Terminal at 260 West 42nd Street, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505.

Fig. 1. One of the new pattern machines.

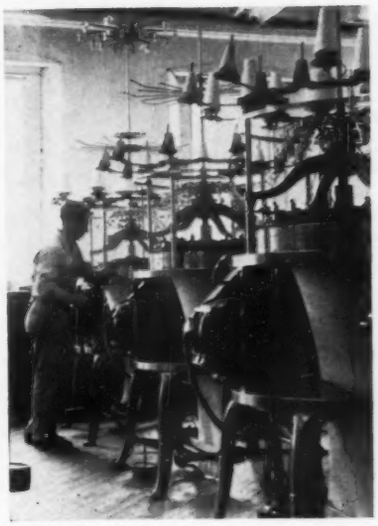


Fig. 2. A group of interlock machines.

has been repaired or remodeled and painted both inside and out. Extensive landscaping is planned which will greatly improve the appearance of the village. Additional homes are to be built, and a community center for the employees is planned.

The mill buildings have also been completely repaired to place it in the ranks of first rate industrial plants. A new roof has been built, each building has been completely refloored with hardwood flooring, all windows have been repaired or replaced, fluorescent lights have been installed, and the buildings have been painted in the latest color schemes.

The power plant, which consisted of three coal fired boilers, has been converted into a completely automatic natural gas fired plant. Oil tanks and oil burners have been installed for emergency use.

New Machinery for Yarn Mill and Dyehouse

Many new machines have been installed in the yarn mill, and all of the old machines have been replaced or repaired. Combers have been installed so that both combed and carded yarns are now being produced. Many other improvements await the arrival of long-ordered parts and attachments.

The dyehouse has been completely rebuilt and all obsolete machinery has been sold. Several additional buildings have been added to this plant in which have been installed the very latest machines for dyeing and finishing yarns and knit goods. A modern water treatment plant for converting the creek water into water suitable for dyeing and finishing has also been built. This department is not yet in full operation due to the shortage of some critical machine parts.

All of the foregoing has resulted in improved working conditions for the employees, whose number will total around 450 when all departments are in full operation. Several pay increases have been given to the employees since this company began operation.

Knitting Department

The knitting department which was operating in Gastonia was moved to Prattville in August 1946 and now occupies the first floor of one of the main mill buildings. All older machines have been replaced with new machines and many additional machines have been added. This department is now able to produce in addition to plain jersey material, all types of stripes, patterns, and interlock materials.

Fig. 1 shows one of the new pattern machines. A view of a group of interlock machines in operation is presented in Fig. 2. Fig. 3 shows a portion of the body size machines and ribbers in this modern knitting room.

Sewing Department

The company had no sewing room so it was necessary that this department be built from the ground up. The first floor of another of the main mill buildings was prepared to accommodate this department.

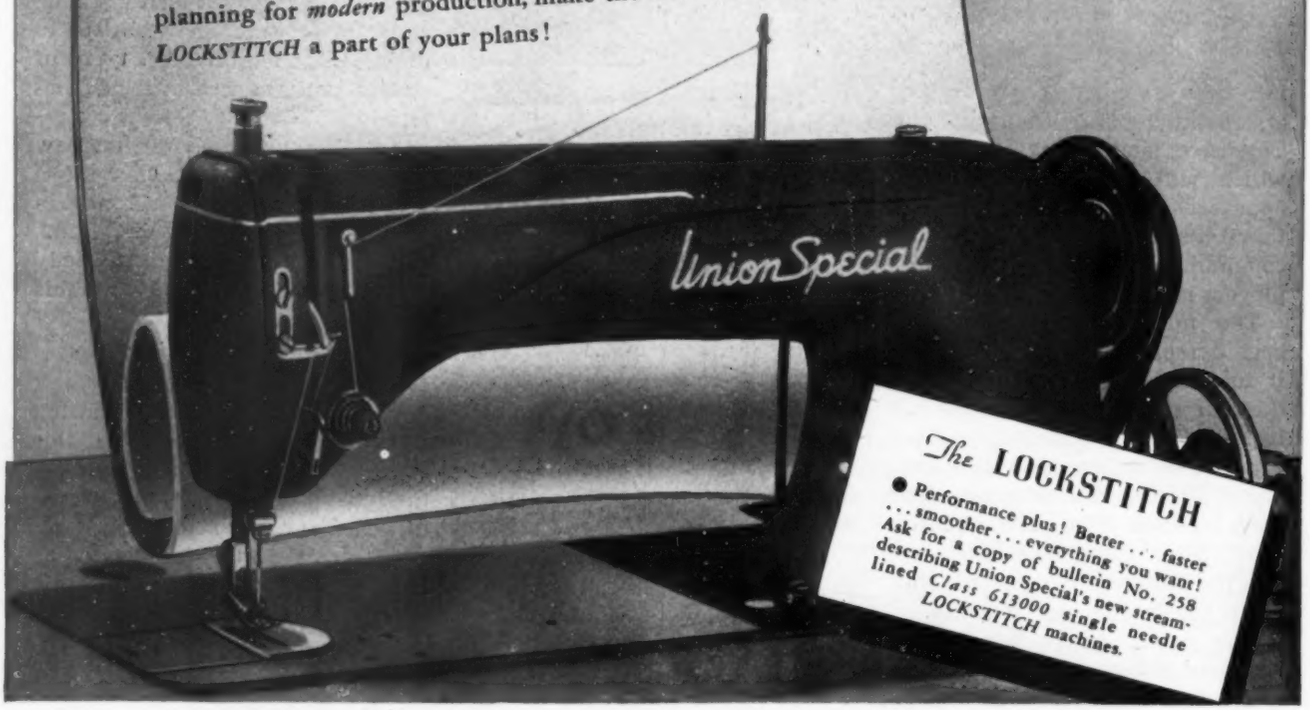
Overhead trolleys for the elec-

Fig. 3. A view of a portion of the body size machines and ribbers.

UNION SPECIAL

Setting the PACE!

THE machines you order now are the tools you will depend on for tomorrow's profits. Now being produced in steadily increasing numbers, Union Special's new *LOCKSTITCH* is truly A MACHINE WITH A GREAT FUTURE! It's the machine that's designed and built to set the pace in the race to cut costs . . . boost output . . . improve quality. If you are planning for *modern* production, make the new Union Special *LOCKSTITCH* a part of your plans!



The LOCKSTITCH

● Performance plus! Better . . . faster . . . smoother . . . everything you want! Ask for a copy of bulletin No. 258 describing Union Special's new streamlined *Class 613000* single needle *LOCKSTITCH* machines.

● **SMOOTH, EFFORTLESS SPEED** — Made possible by new lightweight needle bar . . . magnesium take-up . . . needle bearings . . . scientific counterbalancing . . . ultra-finished bearing surfaces.

● **QUIET, DEPENDABLE OPERATION** — Isolated from table board by new mounting method. Design includes new automatic lubrication for the lower mechanism; screw-conveyor oil feed for the hook-raceway—an exclusive Union Special feature providing positive controlled lubrication to the hook without a pressure pump; quick, external adjustment for hook oil flow regulation; and new oil level sight-gauges.

● **STYLES.** The new streamlined *Lockstitch* is being built in "low throw" *Style 61300 H* with 1-9/64" needle bar travel for work on light and medium weight materials and "high throw" *Style 61300 J* with 1-13/64" needle travel for medium to medium heavy work.

INDUSTRIAL SEWING MACHINES

UNION SPECIAL MACHINE COMPANY • 407 N. FRANKLIN ST., CHICAGO 10, ILL.

Fig. 4 (left). Scene in cutting room.

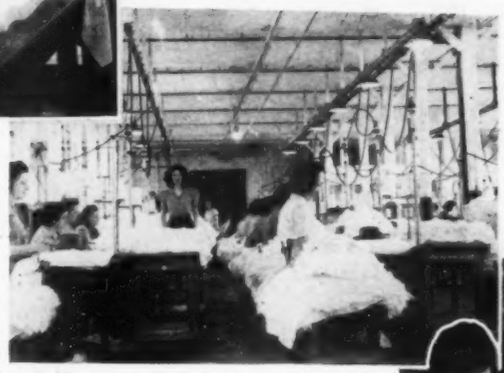
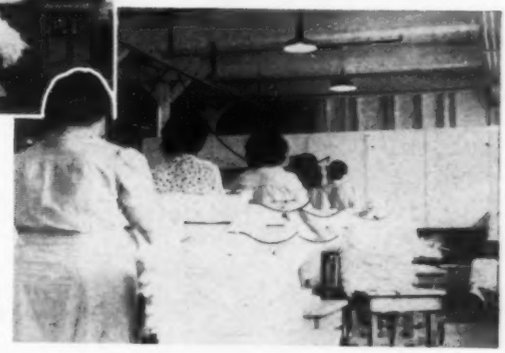


Fig. 5 (right). View of sewing room. Note overhead trolleys for electrical connections.

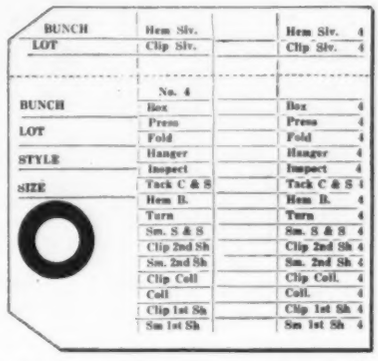
Fig. 6 (below). Operatives inspecting shirts.



trical connections were in stalled. This makes it possible to change the layout of machines at any time without having to change wiring and conduit. Tables for cutting, hand operations, folding, etc., were built. Each machine was installed on a separate table and final adjustments were made.

Fig. 4 shows the cutting table on which the cloth is laid out, marked, cut, and tagged for its start through the sewing operations. Fig. 5 gives a view of the lines of sewing machines. The flow of goods is across the aisles rather than up and down. This is to minimize the handling as much as possible. Fig. 6 shows a line of inspection tables on which each shirt is given a close and careful inspection and is classified as first or second quality.

Fig. 7 (below). Routing ticket.



Each bunch of shirts is given a routing ticket (See Fig. 7) on which is shown a bunch number and lot number. This ticket is attached to each bunch on the cutting table and follows it throughout the remaining operations. When an operator has completed her operation on a bunch, she removes the indicated portion of the ticket and places it on her production sheet from which each operator's daily production is figured.

Pressing and boxing operations conclude the process. The packages are then ready for packing and shipment.

AN EYE ON THE

KNITTING MILLS

Utica (N. Y.) Knitting Co., men's cotton underwear and union suits, has plans for expansion and improvements in the Anniston, Ala., mill, with installation of equipment for increased capacity.

Knit Products Corp. No. 2, Inc., has been organized by Harry A. Lineberger and other officials of Knit Products Corp., and will operate a hosiery mill in Belmont, N. C. The new company, capitalized at $760,000, will specialize in a line similar to that of Knit Products.

Caldwell Full-Fashion Hosiery Mills, Inc., recently organized by officials of the Pilot Full Fashion Mills, Inc., Valdese, N. C., has let contract for a two-story knitting mill in Lenoir, N. C., to cost about $400,000, with machinery.

Devon Knitting Mills, Eshbach, Pa., men's underwear, has plans under way for a one-story addition to the mill, reported to cost close to $85,000, with equipment.

Davenport Hosiery Mills, Chattanooga, Tenn., women's full-fashioned hosiery, has let general contract for a one-story addition, to cost about $40,000, exclusive of equipment.

Sale Knitting Co., Martinsville, Va., sweaters, etc., is carrying out an expansion program, with installation of additional equipment for increased capacity.

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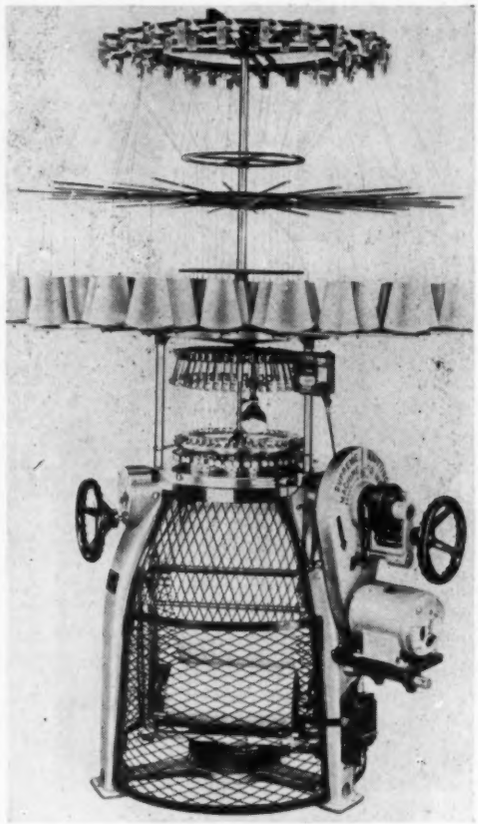


Supreme Body Size Model MJ eliminates slitting and sewing of side seams and matching of stripes on polo shirts and underwear. The planned Body Size comes right off the machine at the amazing rate of 100 yards an hour.

Let us help you select the proper Body Size Model MJ to knit the garment sizes in demand at your mill.

Dia.	Feeds
9"	28
10"	32
11"	34
12"	38
13"	40
14"	44
15"	48
16"	50
17"	54
18"	56

SUPREME

KNITTING MACHINE CO., Inc.

105 JOHNSON AVE., BROOKLYN 6, NEW YORK, N. Y.

Fairy Silk Mills at Shillington, Pa., are in line with the modernization trend. Shown here are batteries of Willcox & Gibbs "Superlock" and lockstitch machines which are used in the manufacture of ladies' knit underwear.

Allotments Extended By Underwear Mills

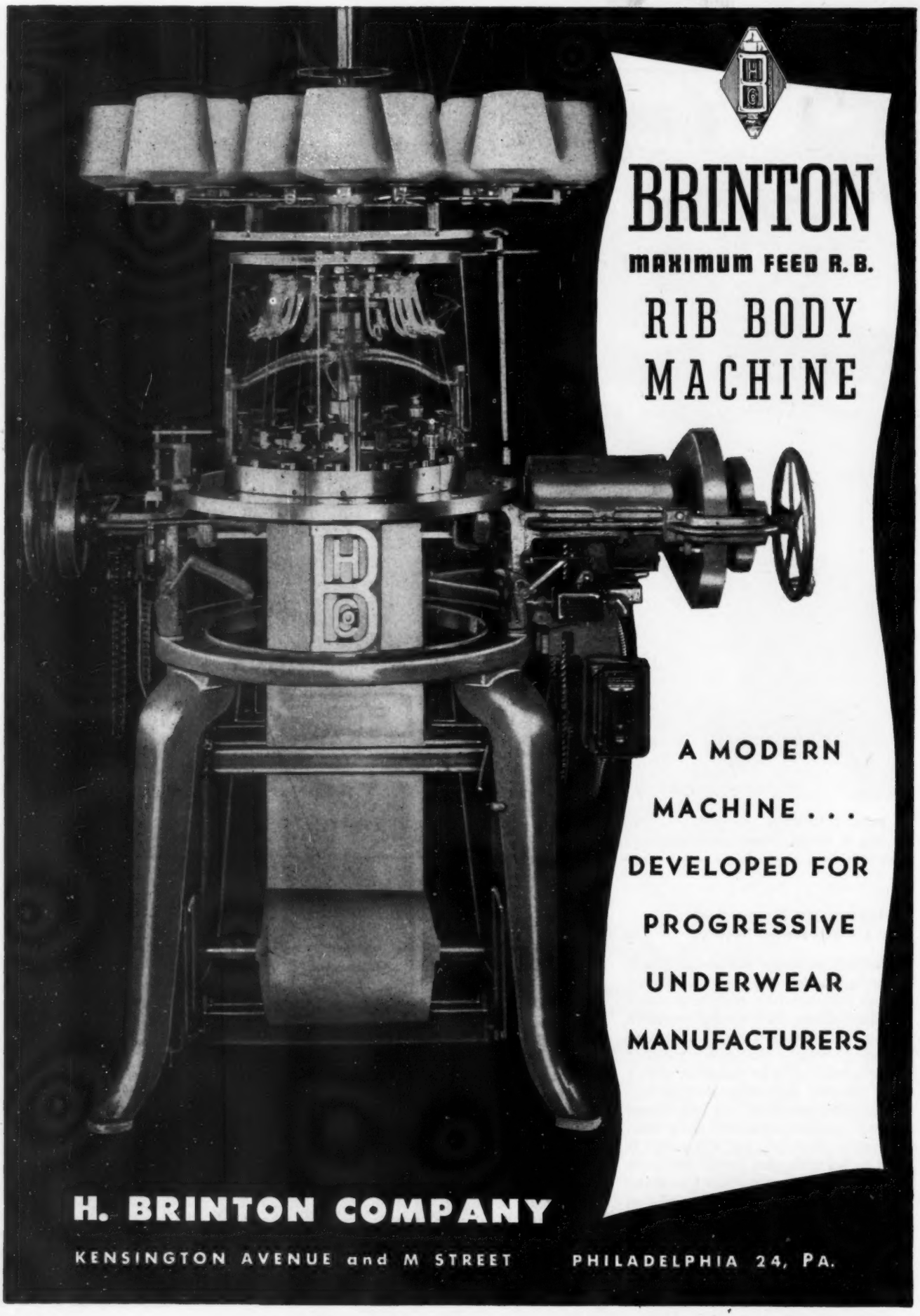
Second quarter allotments have been extended for staple knitted spring merchandise, including men's athletic shirts, "T" shirts, women's union suits, etc., mostly at prices showing some moderate advance when compared with those for which first quarter deliveries were promised. The markups for additional second quarter protection show considerable variation, but the range is said to be from five to ten per cent, which buyers do not regard as being excessive, so far. It is indicated that in releasing these allotments, the manufacturers are responding to the urging of customers.

The latter, it is explained, are much more concerned as to protecting future supplies than they were at the start of buying for first quarter 1948 arrivals. The explanation for this, of course, is that retail distribution now seems likely to remain at a high level for some time to come, and if they can get the type of merchandise they have readily sold in the recent past, the large majority of retailers are not balking at paying the price advances thus far named by the mills. It is conceded that a later test will come, when the public must be confronted with higher retail prices.

The manufacturers apparently have noted that in the leading markets this month the buyer-arrivals show an increase as compared with a year ago. This display of interest, it is said, has encouraged the mills to test out their price ideas for spring, and later, on the wholesalers, first of all. . Supplies of suitable knitwear, on hand and on order, are believed to have been depleted to an unusual extent. In fact, some observers contend the majority of wholesalers not only hold less merchandise now than a year ago, but they say it is of much better average quality.

Advances heard in connection with new allotments have been around 25 cents per dozen for men's athletic shirts, both combed and carded. A few sources that were low for their first quarter allotment are higher than others this time, it is reported.

The men's "T" shirts, it is stated, are up 25 to 38 cents and in some exceptional cases, have risen about 50 cents, depending on what the first manufacturers' prices were. Flat "T"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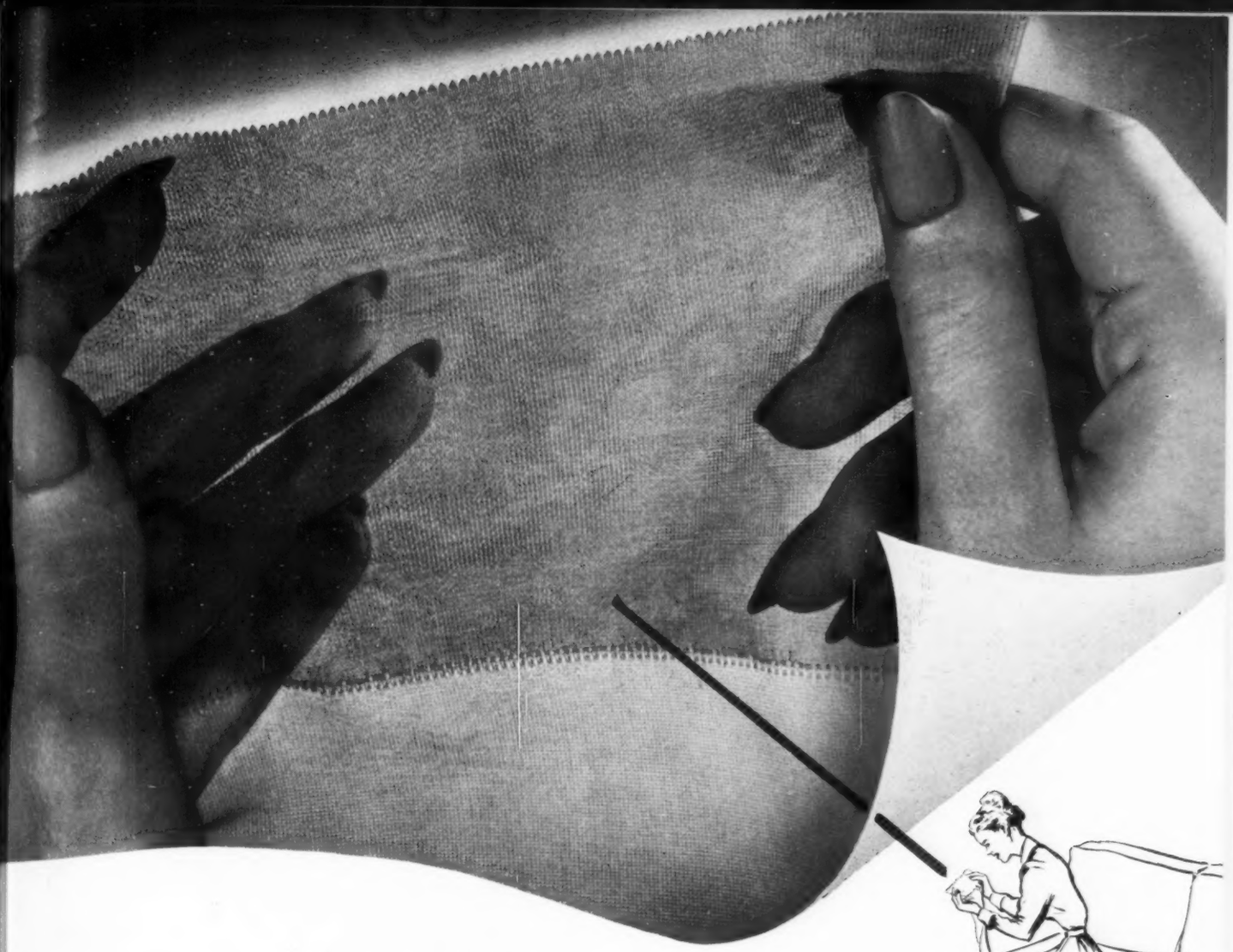

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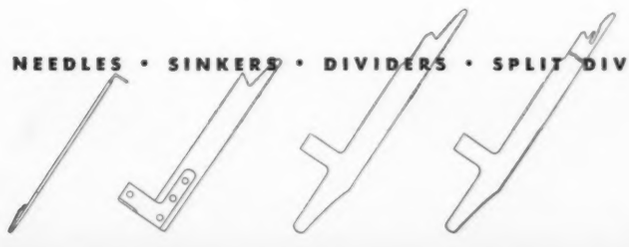

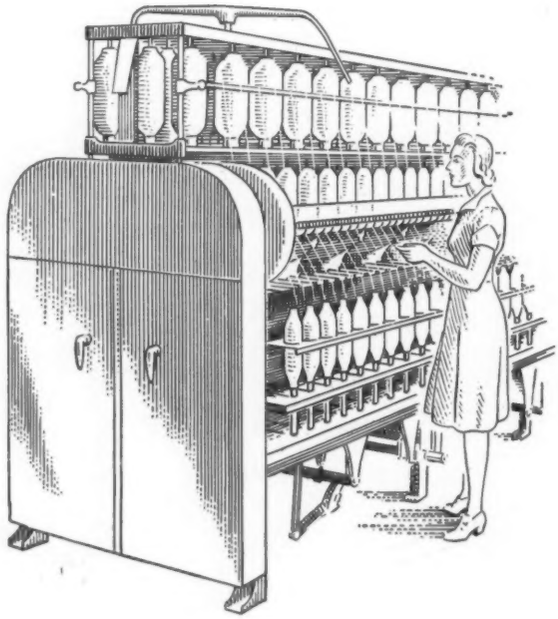

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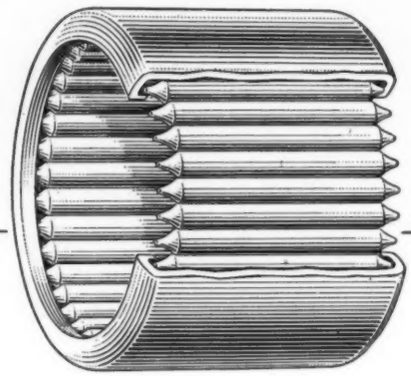
The higher speeds and heavier packages handled by Torrington Needle Bearing equipped spindles are typical of the advantages gained by the application of these efficient anti-friction units in a wide range of textile machinery.



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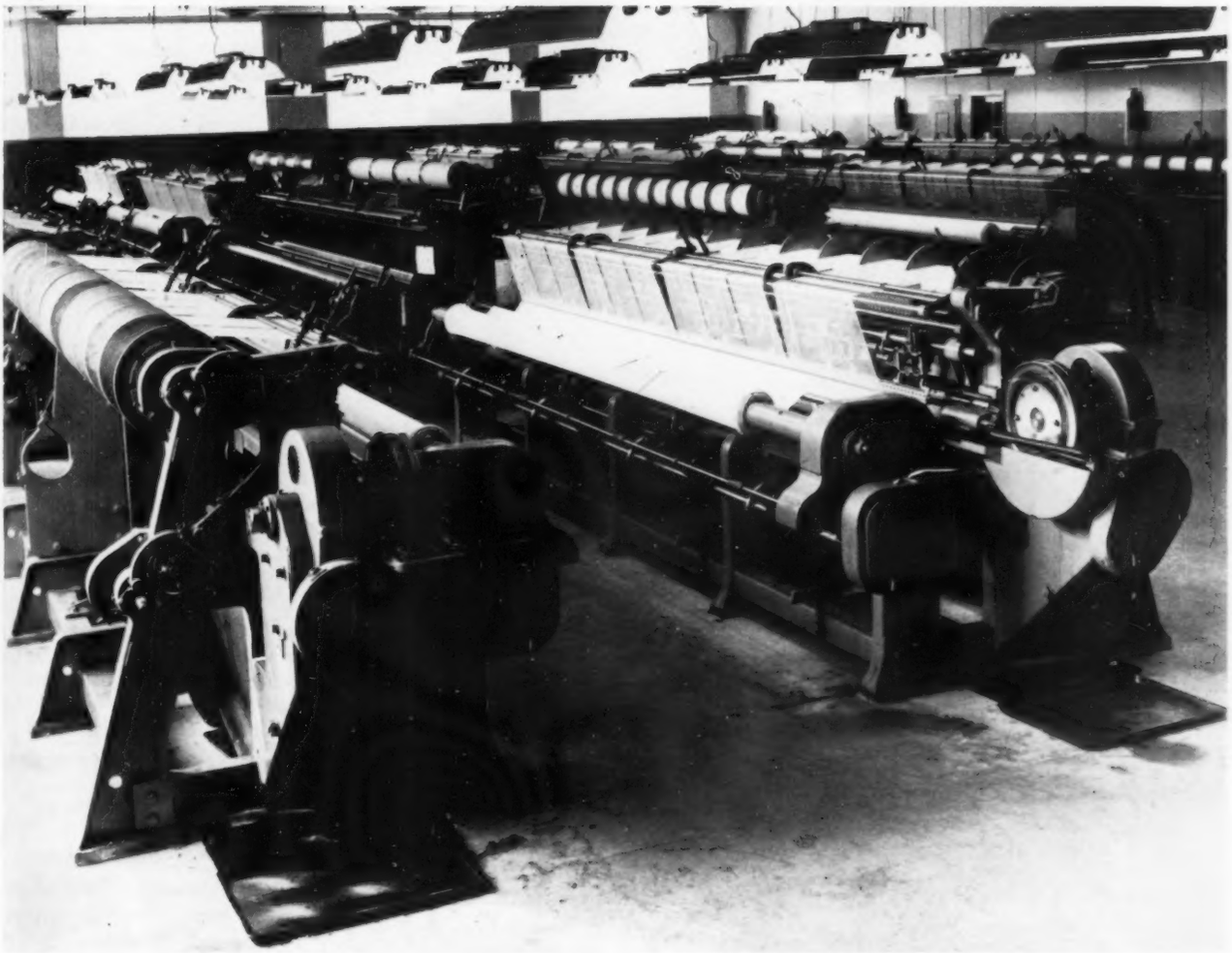

An installation of Reiner tricot machines in the modern plant of Roselin Mfg. Co., Inc., Willimatic, Conn.

shirts have been advanced considerably less than those having ribs, it is understood.

In women's lightweight ribbed suits, advances are reported of 50 cents per dozen, and in the case of combed goods this is thought to represent only the higher cost of combed yarn since the initial orders were booked for first quarter deliveries of this item.

A well-known balbriggan mill in the East announced additional allotments for first quarter to regular customers only, at a price advance of one dollar ($1.00) per dozen. This is said to work out at $10.50 for shirts and $11.50 for drawers.

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CLOVERLEAF-Freeland BOBBINS

The background for the foregoing reports appears largely to center on the substantial advance that took place in yarn costs during the last several weeks. Within the past month, combed yarns have advanced seven to ten per cent for knitters, and carded yarns from five to seven per cent, when compared with what was being paid at the end of November, 1947.

On top of this, wage increases have been noted and in the not distant future, it is asserted, another wage-boost cycle will have commenced, though all of the underwear mills are already operating at the highest wage level in their history. It is estimated that underwear mills now are averaging $1 to $1.20 per hour for their labor outlay. In addition, mill authorities remark, all other manufacturing materials and supplies are more costly than they were only a couple of months ago, and this seems likely to continue. The underwear sources contend that where prices for finished merchandise have to be raised, it is done only after very careful study, with all possible consideration given to the effect this may have on the customers.

Yarn Supply is Key To Hosiery Output

Women no longer have to stand in line on the sidewalk to buy stockings, but retailers have no oversupply of hosiery. There is no lack of a consumer market, but hosiery mills have worked part-time over the past several months. This is mainly because of lack of sufficient yarns, whether of natural or synthetic origin.

In the urge for wanted merchandise, retailers appear to be not much ahead of last year. Their books show larger dollar inventories, but their shelves are not over-loaded with merchandise. New orders placed by retailers have increased, but the consumer demand cannot be filled simply with orders.

The answer seems to be that in the hosiery industry, most manufacturers have been operating at the practical peak of their capacity, but consumer demand still sets the pace after a long period during which the hosiery mills have been striving to "catch up with the demand." The flow of money has been far greater than the flow of goods. Many knitwear items seem to cost about twice as much as they did before the war, but so far, consumers have not been scared off by high retail prices.

In the background of the hosiery

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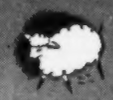
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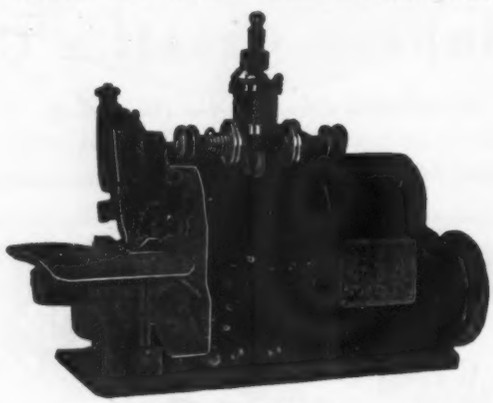

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situation is the yarn supply. The stiff rise in yarn costs, it is stated, is a "standout," especially with regard to the kind of cotton yarn used for making stockings. As compared with cotton yarn, industry spokesmen claim, rayon cost has increased moderately. Cost of nylon to hosiery mills actually has decreased since 1940, it is admitted. At the end of 1940, according to an official compilation, thirties single grey combed yarn (cotton) could be had readily for 37 cents per pound. Now it is priced at above $1.00 per pound and it hard to get even when hosiery knitters are willing to pay premiums.

Woolen and worsted yarns consumed by hosiery mills also have advanced materially, but exact comparisons are not available at this writing. In relation to prospects for better supply of yarn for hosiery, it is explained, there seems to be at present only slight encouragement as regards yarns spun from the natural fibers. Combed and mercerized put-ups in the cotton yarn field, which are preferred by hosiery mills, now appear likely to remain high-priced indefinitely, and seem unlikely to be in more liberal supply for some months to come. Prices for raw wool really are determined in the world market, and the labor costs of woolen and worsted processors reached a new peak lately, per unit of production.

Mainly because of expectation that supply of rayon and nylon yarns will become more adequate soon, hosiery manufacturers predict they will be able to handle at least as large a business this year as they did in 1947. This year will witness a gain in output of women's nylon hosiery. The 1947 out-turn of nylons was slightly over 36,000,000 dozen pairs. This compares with around 29,000,000 dozen pairs of nylons during 1946. As viewed by industry statisticians, if sufficient nylon yarn comes through, the industry can expect to make and sell profitably around 45,000,000 dozen pairs of nylon goods this year.

Hosiery manufacturers are said to look for relatively little increase in use of silk in their field, in spite of the belated reduction by the government in the prices named for raw silk. Hosiery was the largest American consumer of raw silk before the war. Nylon is understood to have largely replaced silk for this purpose, and nylon yarn is favored instead of silk by the hosiery workers as well as the manufacturers. Still more important, it is alleged, is the fact that the average American consumer of hosiery seems to be satisfield that nylon hosiery affords "the ultimate" in appearance and durability.

It is claimed by hosiery people that the government is partly to blame for failure of raw silk to get a better "come-back," so far; but it is to be expected that further attempts to restore this fiber will be made, in line with the government's policy of helping to rehabilitate Japan.

Near Outlook Clouded, Knitwear Folks Say

Hosiery and underwear manufacturers and distributors are going ahead with their plans for expansion, but their spokesmen say the outlook is being viewed with considerable conservatism in some quarters. On the surface, it is stated, most of the customary signs remain favorable. When the details are examined, on the other hand, some authorities in the knitwear field contend there are uncertainties, which later on may lead to serious complications. Among these the following are mentioned:

The persistent inflationary spiral, not only in this country, but elsewhere in the industrial and commercial world; the probability of industrial strife when and if large producers seek to check the long-continued rise in labor costs; the possibility that Congress and/or the Administration may adopt radical methods of handling economic questions.

Some spokesmen feel that rising prices in the retail field eventually may have the effect of excluding too many people from the markets; that the only real way to regain control of production costs is to increase the output per worker; that to make a real gain in plant and distribution efficiency may take a long time; that a very exceptional degree of cooperation is necessary in this direction.

Industry observers count on retail prices remaining high. They expect that before spring, prices asked by retailers for important knitwear items may undergo a further advance or around ten per cent. It is conceded that around mid-year, some commodity prices may become stabilized, or even commence to recede. If so, it is important for the mills and distributors to know in advance whether mid-year adjustments (if there are any) will be orderly or abrupt, which is something about which very few are willing to offer predictions.

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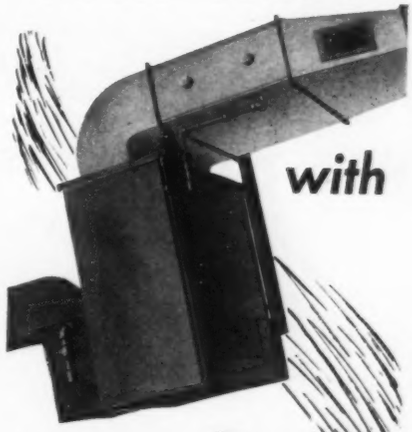

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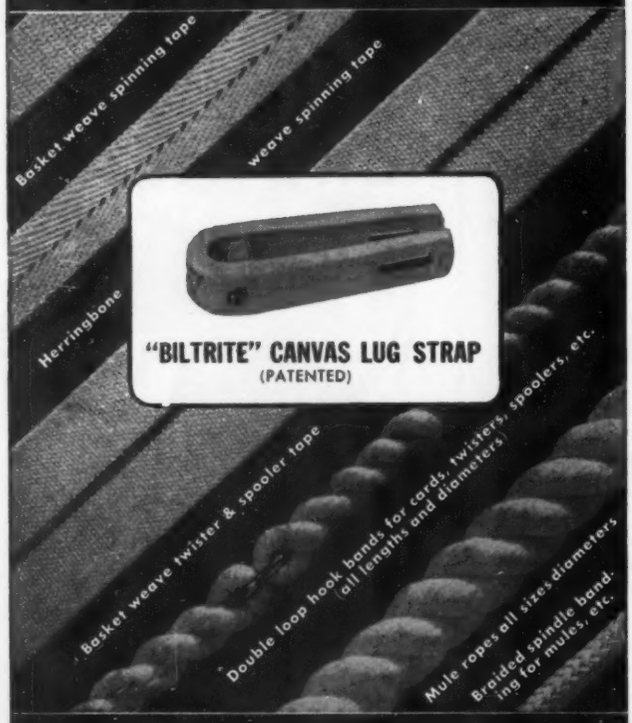
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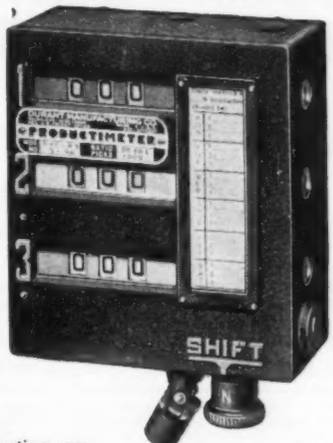

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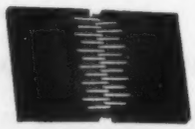

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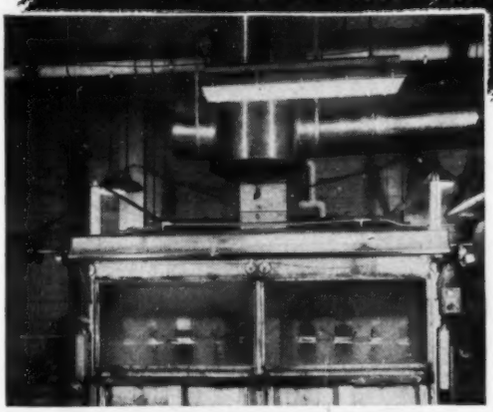

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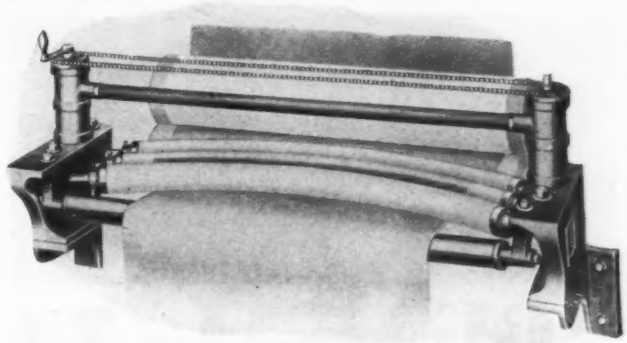

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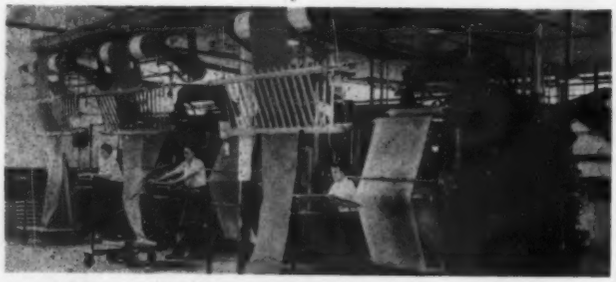

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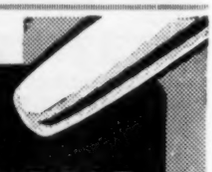

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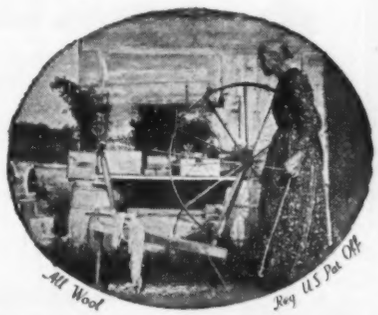

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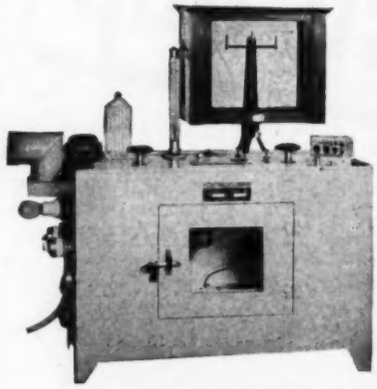

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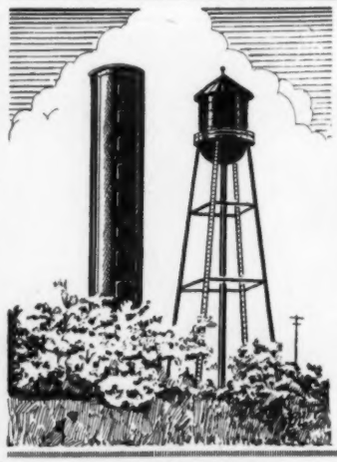

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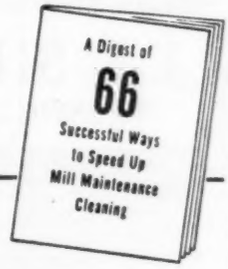

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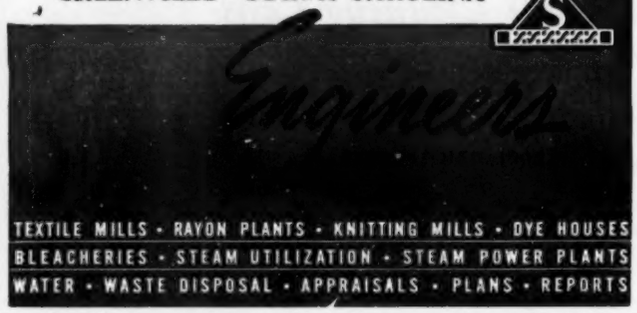

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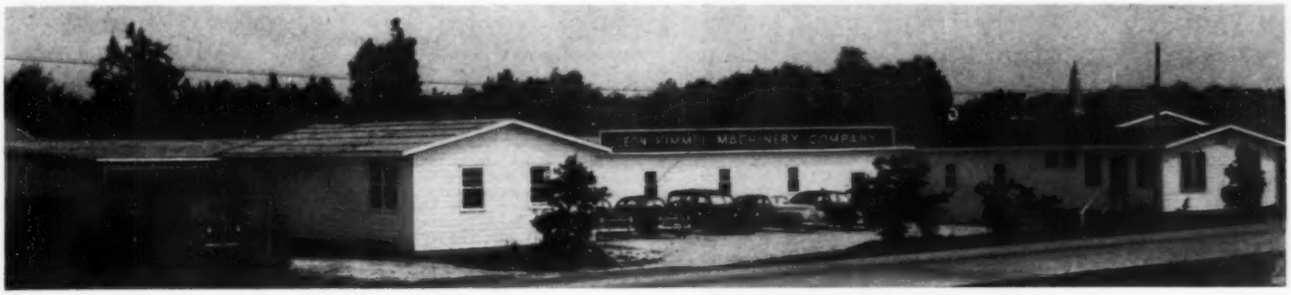

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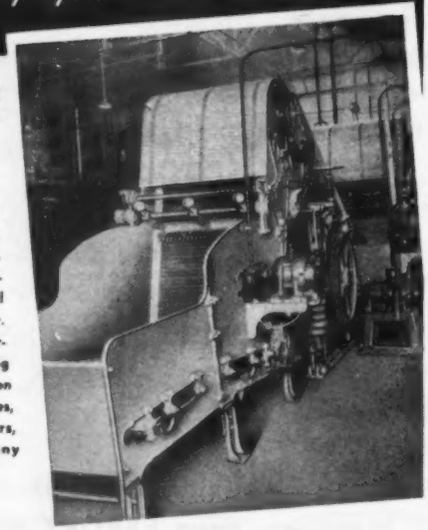

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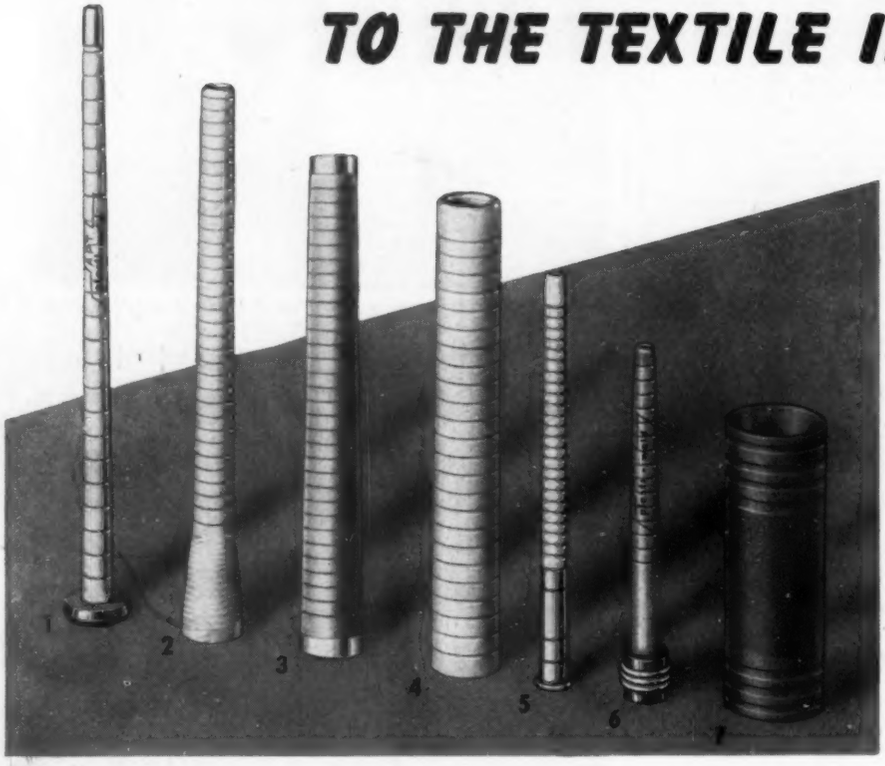

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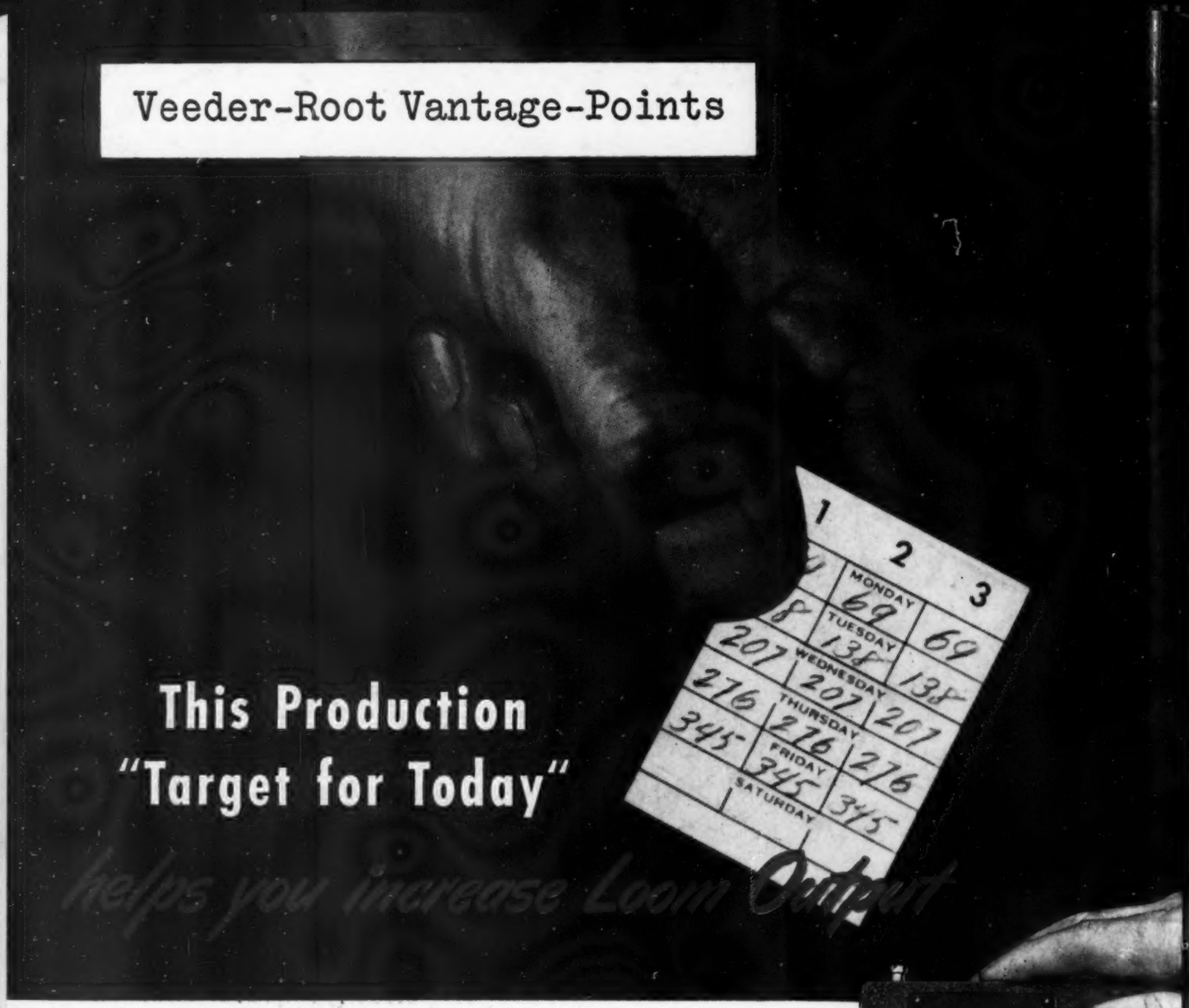
2001 North Tryon Street • Telephone 4-6857 • Charlotte 2, N. C., U. S. A.

Veeder-Root Vantage-Points



This Production "Target for Today"

helps you increase Loom Output

On this convenient card (supplied with every 2-3 Pick Counter) written figures indicate number of thousand picks to be produced on each shift, each day.

So overseers can check the actual production figures in the counter-windows — *at a glance* — against the pre-set "*Count*rol" figure on the card. And they can tell *instantly* whether a loom is lagging, and take immediate steps to correct it.

This feature is one of 12 Veeder-Root Vantage-Points which you get with every 2-3 Pick Counter. Have your Veeder-Root representative show you just how these points will pay off in *your* mill. Write

VEEDER-ROOT INC.
HARTFORD 2, CONN.
GREENVILLE, S. C.

OFFICES IN: Boston, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Montreal, Buenos Aires, Montevideo, Mexico City. *In England*: Veeder-Root Ltd., Dickinson Works, 20 Purley Way, Croydon, Surrey. *In Canada*: Veeder-Root of Canada, Ltd., Montreal.

VEEDER-ROOT 2-3 Pick Counters

Quickly Convertible from 2- to 3-Shift Operation . . . Right in Your Mill

Reset and Non-Reset